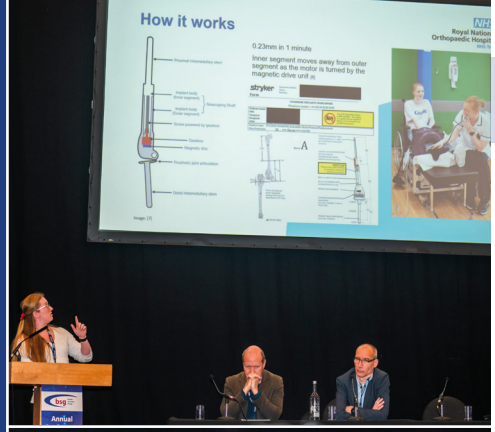
bsg British Sarcoma Group

Annual Conference 2025

PROGRAMME & ABSTRACT BOOK

5th & 6th March 2025, Hilton Newcastle Gateshead

Contents



Welcome to the **BSG Conference 2025**

Welcome to Newcastle!

The British Sarcoma Group and the Newcastle sarcoma team warmly welcome you to the British Sarcoma Group's annual conference at the Hilton Newcastle Gateshead!

Set on the bank of the Tyne, Hilton Newcastle Gateshead is the perfect location to show off the beautiful views of our iconic bridges & historic buildings along the River Tyne. Whilst enjoying our stunning views, let us also reflect on the narrative of sarcoma – a story of learning, analysis, questioning, and shaping the future landscape of sarcoma care.

Over the next two days, our agenda is brimming with updates and insights from international, UK-wide, and local contributions. We have tailored the programme to include sessions on controversies in breast angiosarcoma, radiotherapy advancements, and a spotlight on optimising pathways of care. Both invited speakers and proffered talks will grace our platform, ensuring a diverse and enriching experience for all attendees.

This year, our poster presentations showcase incredible work across various disciplines, offering something of interest to everyone.

We would like to extend our thanks to all the members of our team and those that have contributed to developing and delivering the conference from our hosts, charities and sponsors to all the team at Echo Events - without Claire and her team this conference would not have been possible.

We all very much look forward to sharing experiences, learning together, networking and socialising.

Thank you all for attending.

BSG 2024 Organising Committee

General **Info**

REGISTRATION
The registration desk will be located in the foyer for both days of the conference.

REFRESHMENTS
Refreshments and lunch on both days will be served in the foyer.

EXHIBITORS & CHARITIES
Exhibitors will be located in the foyer

CONFERENCE SESSIONS
Will take place in the Gateshead Suite & the Breakout Room.

PRESENTERS
Presenters must have their talks loaded to the show laptops well in advance of their lecture. There will be no allowance for individuals to load their slides at the time of the presentation or use their own laptop. On arrival please report to the registration desk where a member of the events team will direct you to the AV team.

POSTER DISPLAYS
Posters will be displayed in the foyer area. Access to the poster displays will be available from Wednesday 5th March at 8am. Posters must be taken down at the close of conference. Any posters left after the conference will be discarded.

ABSTRACTS
Abstracts for oral talks and poster displays can be found on pages 25 - 77.

THE CONFERENCE DINNER
The BSG Conference Dinner will take place at Hilton Newcastle Gateshead on Wednesday 5th March. The evening includes a complimentary drink on arrival and a three course meal with wine. Dress code is informal.

CPD CREDITS
This event has been awarded 12 CPD points by the The Royal College of Surgeons of England. Attendance certificates will be emailed after the event.

PRIZES
We'll be presenting a prize to the best poster and best oral paper in the closing session on Day Two.

EVALUATION
An online feedback form will be sent after the event. We appreciate your time in completing this.

WIFI
Wifi is complimentary and availble to the whole venue. No password is required

Message from the BSG President

Welcome to Newcastle, or more accurately Gateshead, for our 21st annual BSG Conference. Last time here was 2011. Many thanks to Kenny Rankin and colleagues here in Newcastle, along with our secretariat from Echo, for all the work in organising this event and providing a fabulous programme. If your team are interested in putting your service on the map and hosting in the next 2 years, please let us know!

As usual this is a great opportunity to meet colleagues, compare notes, and learn information that will benefit our clinical work. Working in an always stretched health service is challenging but meeting like this helps to reinvigorate and motivate.

After a lot of work, we managed to get the BSG guidelines on soft tissue sarcoma, bone sarcoma, and GIST published, all in the British Journal of Cancer. Plus, rehabilitation guidelines published in the journal, Disability and Rehabilitation. Many thanks, and congratulations to all involved for sparing the time to work on these influential documents.

The Speciality Advisory Group continues to meet regularly led by Anant. There has been much discussion on service pathways, as every region struggles with increasing referrals to sarcoma services. Sadly, whilst we are seeing more benign or low-grade disease, there are still delays to diagnosis of high-grade sarcoma. We therefore continue our work with Sarcoma UK on the challenging issue of early diagnosis. We now see the new opportunity, and challenge, of Community Diagnostic Centres, and although our involvement in their development has so far been limited, we need to look out for areas where we can provide support.

It has been an honour to take on the role of BSG President over the past 3 years. It is always difficult to achieve as much as we'd like when we have other significant commitments, but it has been very satisfying to help support three annual meetings and the guideline development; I look forward to continuing to work with the BSG Board to optimise treatment pathways and improve access to new treatments for our patients. At the end of this conference, I am delighted to hand over the presidency to a very safe pair of hands in Mr Anant Desai, consultant surgeon, from Queen Elizabeth Hospital, Birmingham, who has already been an enthusiastic supporter of the BSG for several years.

Thanks for making the effort to attend conference this year. I look forward to hearing from, and meeting many of you, over the next 2 days, and over the coming year as the work of the BSG continues.

Enjoy the conference!

Dr Adam Dangoor
BSG President
Medical Oncologist
Bristol

About the **British Sarcoma Group**

The British Sarcoma Group is registered as a charitable incorporated organisation (CIO) by the Charity Commission. Our registration number is 1154928. A CIO has the legal privileges of a full charity together with aspects of legal protection and limited liability which apply to companies.

MEMBERSHIP

All clinicians, nurses and supporting professionals who treat patients with sarcoma in England, Wales, Scotland and Northern Ireland are eligible to join the British Sarcoma Group – membership is free and gives the following benefits:

Membership Benefits

- Become part of an engaged community of fellow specialists seeking to improve sarcoma treatment
- Access member surveys and research
- Help influence national guidelines on best practice
- Join a national network of those working to treat sarcoma
- Benefit from educational opportunities
- Receive regular newsletters and updates from us

THE AIMS OF THE BRITISH SARCOMA GROUP ARE:

1. To promote the education of medical, nursing and healthcare professionals in the UK concerned with the treatment and care of patients with bone and soft tissue sarcomas through the provision of information, training, and the identification of best practice

2. To promote excellence in the healthcare and treatment of patients with bone and soft tissue sarcoma, through enabling specialist healthcare professionals to identify and share best practice

3. To promote and support research, including the publication of results to support the development of more effective treatment and care of patients with bone and soft tissue sarcomas

4. To improve the knowledge and understanding of sarcoma amongst the medical profession and general public.

HOW TO JOIN

Becoming a member of the British Sarcoma Group is quick and easy – simply fill in the BSG Membership Form and return to support@britishsarcomagroup.org.uk and we will set up your membership.

Already a member? You can update your details using the BSG membership form available online at www.britishsarcomagroup.org.uk

NURSING & AHP MEMBERSHIP

The BSG is open to nurse specialists/AHPs/key workers in academic or research roles related to sarcoma. Nursing & AHP membership is part of the British Sarcoma Group Membership.

FUNDING

The BSG's income comes via the annual conference. Sponsorship and delegate registrations fund the cost of running the conference, with any small surplus allocated to support other BSG projects such as production of the BSG guidelines and to secure the conference venue for the following year.

Administration of the British Sarcoma Group

Routine administration of the charity and conference management is undertaken by the Secretariat who can be contacted at support@britishsarcomagroup.org.uk or on 0191 244 2581.

TRUSTEES

The BSG is managed by a Board of Trustees with support from advisory groups relating to specific projects.

The Trustees are:

- **President - Dr Adam Dangoor,** Medical Oncologist, University Hospitals Bristol
- **Dr Alex Lee**, Consultant Medical Oncologist, Leeds Teaching Hospitals NHS Trust
- **Mr Anant Desai,** Consultant Surgeon, University Hospitals Birmingham
- **Prof Andrew Hayes**, Consultant Surgeon, Royal Marsden Hospital, London
- **Dr Charlotte Benson**, Consultant Medical Oncologist, Royal Marsden Hospital
- **Christine Millman**, Sarcoma CNS, North Bristol NHS Trust Southmead Hospital
- **Mr Craig Gerrand**, Consultant Orthopaedic Surgeon, Royal National Orthopaedic Hospital, Stanmore
- **Debbie Artis,** Sarcoma Physiotherapist, Leeds Teaching Hospitals NHS Trust
- **Dr Ioanna Nixon**, Consultant Clinical Oncologist, Head and Neck / Sarcoma, The Beatson West of Scotland Cancer Center, Glasgow, UK
- **Johanne Vass**, Sarcoma Advanced Nurse Practitioner, Swansea Bay University Health Board
- **Dr Owen Tilsley**, Clinical Oncologist, Velindre Hospital, Wales
- **Sherron Furtado,** Senior Sarcoma Research Therapist, Royal National Orthopaedic Hospital
- **Sian Alsousou**, Sarcoma CNS, Liverpool University Hospitals

There are opportunities for BSG members to get involved in advisory and working groups that contribute to particular areas of the BSG's work. If you are interested, please talk to one of the Trustees or email support@britishsarcomagroup.org.uk

Conference Programme

Day One: Wednesday 5th March 2025

08:00 - 08:50	**Registration, Coffee & Teas**	
08:50 - 09:00	**Welcome to the BSG 2025** Kenny Rankin, Newcastle upon Tyne Hospitals	Gateshead Suite
09:00 - 09:10	**President's Welcome and BSG Update** Adam Dangoor, President, British Sarcoma Group	
SESSION 1:	**Desmoid/Fibromatosis** Session Chair: Beth Lambourne	
09:10 - 09:30	**Nirogacestat/systemic therapies** Andrea Napolitano, The Royal Marsden	Gateshead Suite
	Alternate Treatment Options	
09.30 - 09.40	**Cryotherapy** Ed Johnston & Andrea Napolitano, The Royal Marsden	
09:40 - 09.50	**Radiotherapy** Rob Turner, Leeds Teaching Hospital	
09.50 - 10.00	**Surgery for intra-abdominal desmoid** Emily Thompson, NIHR Academic Clinical Lecturer in Transplant Surgery, Newcastle Univeristy	
10.00 - 10.10	**FREE PAPER - Change Proposal for Initiating Patient-Initiated Follow-Up – Desmoid Fibromatosis** Ariana Barradas da Silva, University College London Hospital	Gateshead Suite
10.10 - 10.20	**FREE PAPER - Systemic treatment of Desmoid Tumours: A single centre study, Leeds, UK** Eliot Leonard, University of Leeds	
10.20 - 10.30	**FREE PAPER - Optimizing Desmoid Fibromatosis Management: 14-Year Outcomes of Conservative vs. Surgical Approaches at Glasgow Royal Infirmary** Vidhi Saraf, University of Glasgow; Sanjay Gupta, Glasgow Royal Infirmary	
10.30 - 11.00	**Morning Refreshments & Poster Viewing**	
SESSION 2:	**Breast Angiosarcoma** Session Chairs: Andrew Hayes	
11:00 - 11:15	**Setting the scene - the patient experience:** Sam Hackett, Sarcoma UK	Gateshead Suite
11:15 - 11:30	**Incidence, management principles** Mahbubl Ahmed, University College London Hospitals	
11.30 - 11.45	**Surgical management debate: excise the whole radiation field versus a disease specific approach.** Pat Crowley, The Newcastle upon Tyne Hospitals; Michelle Wilkinson, The Royal Marsden	
11.45 - 12.30	**MDT Session** Interactive session	
12.30 - 13.30	**Lunch & Poster Viewing**	

SESSION 3:	Radiation Oncology Session chairs: Rob Turner	
13.30 - 13.50	**Adjuvant radiotherapy for high grade uterine sarcoma** - Mahbubl Ahmed, University College London Hospitals	Gateshead Suite
13.50 - 14,10	**Definitive radiotherapy for inoperable high-grade bone and soft tissue sarcoma** Jonathan Towler, University College London Hospitals	
14.10 - 14.30	**Radiotherapy for malignant phyllodes tumour** - Mai Bishr, The Institute of Cancer Research	
14.30 - 14.40	**FREE PAPER - A large single center retrospective analysis of surgery for extremity, non-coelomic leiomyosarcoma (LMS) –low rates of adjuvant radiotherapy is still associated with excellent local control.** Andrew Hayes, The Royal Marsden	
14.40 - 14.50	**FREE PAPER - Phase II prospective trial of intensity modulated radiotherapy (IMRT) in primary bone sarcomas, and dosimetric comparison with proton beam therapy (PBT)** Beatrice Seddon, University College London Hospitals	

SESSION 3:	AHP / CNS Session chairs: Alice Dean & Anna Bell	
13.30 - 13.50	**ACCEND speaker** Carolynne Hardy, South Tyneside & Sunderland NHS Foundation Trust	Breakout Room
13.50 - 14.10	**Prehab** Liz Ridgeway, Peninsula Sarcoma Service	
14.10 - 14.20	**Newcastle support group** Alice Dean & Anna Bell, The Newcastle upon Tyne Hospitals	
14.20 - 14.30	**FREE PAPER - A model of an Orthopaedic Oncology clinic: A soft tissue centre and patients' perspective** Debbie Artis, Leeds Teaching Hospital	
14.30 - 14.50	**Lipoma Pathways** Christine Millman, North Bristol NHS Trust and Johanne Vass, Swansea Bay UHB	
14.50 - 15.00	**FREE PAPER - Optimizing Referral pathways for Sarcoma Patients: A Clinical audit of the Faster Diagnosis framework** Sian Alsousou, University Hospitals of Liverpool	

14.50 - 15.00	**FREE PAPER - Establishing an MR Planning scan Service for Sarcoma Radiotherapy** Stefanie Thomson & Sharon Cave, NHS Greater Glasgow & Clyde	Gateshead Suite

		Breakout Room

15.00 - 15.30	Afternoon Refreshments & Poster Viewing

SESSION 4:	Clinical Trials Session Chair: Quentin Campbell Hewson	
15.30 - 15.35	**ICONIC** Sandra Strauss, University College London Hospitals	Gateshead Suite
15.35 - 15.45	**SUNDIAL** Sanjay Gupta, Glasgow Royal Infirmary	
15.45 - 15.50	**SarcoSIGHT** Kenny Rankin, The Newcastle upon Tyne Hospitals	
15.50 - 16.00	**NCRI replacements and Sarcoma trials on NIHR portfolio** Aisha Miah, The Royal Marsden & Kenny Rankin, The Newcastle upon Tyne Hospitals	

SESSION 4:	AHP / CNS Session chairs: Alice Dean & Anna Bell	
15.30 - 15.45	**FREE PAPER - The Cancer Pathway Navigator Role** Rebecca Peach, North Bristol NHS Trust	Breakout Room
15.45 - 16.00	**Interactive sessione with slido** Christine Millman, North Bristol NHS Trust; Sian Alsousou, University Hospitals of Liverpool & Debbie Artis, Leeds Teaching Hospital NHS	

SESSION 5:	Innovation Session chair: Tom Beckingsale	
16.00 - 16.30	**KEYNOTE - Zurich Sarcoma Comparative Oncology Experience** Mirja Nolff, University of Zurich	Gateshead Suite
16.30 - 16.50	**Implementation of surgical technologies- robotics, mixed reality** Ather Siddiqui, Oxford University Hospitals NHS Trust	
16.50 - 17.00	**FREE PAPER - Impact of whole genomic sequencing on diagnosis and prognosis of 120 patients with bone and soft tissue sarcomas at the Oxford Sarcoma Service 2021-2024.** Katie Herbert & Sarah Pratap, Oxford University Hospitals	
17.00 - 17.10	**FREE PAPER - HOPE for Intrahepatic Leiomyosarcoma Resection – A Case Report** Ruth Owen and Emmanouil Psaltis, The Newcastle upon Tyne Hospitals	
17.10 - 17.20	**FREE PAPER - Oxford Precision Oncology for Sarcoma (OxPOS), a prospective observational and data inte gration cohort for sarcoma care innovation.** Andrew B Hassan, University of Oxford	
17.20 - 17.30	**FREE PAPER - An international, multi-centre study of surgical margins in intermediate to high grade sarcoma** Marcus Brookes, The Newcastle upon Tyne Hospitals	
17.30 - 17.40	**FREE PAPER - Investigating Ewing sarcoma incidence, survival and management using national cancer registry data** Reuben Hastings, UCL Cancer Institute	
17.40	**Day one closes**	
19:30 20:00	**Drinks Reception** - Hilton Newcastle Gateshead **Conference Dinner** - Hilton Newcastle Gateshead	

Conference Programme

Day Two: Thursday 6th March 2025

07.00	**Mini Great North Run: please join us at the Hilton Hotel Reception for a fun run around the Quayside!** Pacesetters Mahbubl Ahmed (UCL) for fast runners and Kenny Rankin (Newcastle) for a slow jog!	
08:30 -08:50	**Coffee and Teas**	
08:50 - 09:00	**Welcome to Day Two** Kenny Rankin, The Newcastle Upon Tyne Hospitals	
SESSION 6:	**Optimising Pathways** Chair: Gail Halliday	
09:00 - 09:20	**Early diagnosis** Rob Turner, Leeds Teaching Hospitals	Gateshead Suite
09.20 - 09.40	**Radiology led first contact soft tissue sarcoma pathway- experiences from the Peninsula Sarcoma Service** Priya Suresh, Peninsula Sarcoma Service	
09.40 - 10.00	**Ambulatory chemotherapy** Hanna Simpson, The Christie NHS Foundation Trust	
10.00 - 10.15	**National Spinal MDT** Alistair Irwin, The Newcastle Upon Tyne Hospitals	
10.15 - 10.30	**Rehabilitation guidelines** Debbie Artis, Leeds Teaching Hospitals	

10.30 - 11.00	**Morning Refreshments & Poster Viewing**	
SPONSORED SESSION:	**Deciphera Symposium**	
11:00 - 11:20	**BSG's UK GIST Guidelines: Considerations & Implications in Clinical Practice** Robin Jones, The Institute of Cancer Research & Max Almond, Birmingham University Hospitals *This is a promotional symposium sponsored and organised by Deciphera UK Ltd intended for UK HCPs only. This session will provide an overview of the updated UK GIST Management Guidelines, focusing on clinical considerations.*	Gateshead Suite
SESSION 7:	**Updates from charities**	
11:20 - 11:30	**BCRT update** Zoe Davison, Bone Cancer Research Trust	Gateshead Suite
11.30 - 11.40	**Long-term follow-up and late effects services for UK primary bone cancer patients: a service mapping exercise.** Ruth Eldershaw, Bone Cancer Research Trust, Fast Stream & Emerging Talent, Civil Service.	
11.40 - 11.50	**Sarcoma UK update** Sorrel Bickley, Sarcoma UK	

SESSION 8:	**Medical Oncology** CHAIR - Anna Stansfeld & Beth Lambourne	
11.50 - 12:05	**TKI in bone sarcoma** Javier Pozas, University College London Cancer Institute	Gateshead Suite
12:05 - 12.20	**Off-license/ repurposing drug therapy** Alex Lee, The Christie NHS Foundation Trust	
12.20 - 12.30	**FREE PAPER - Clinico-pathological risk score after neoadjuvant imatinib predicts relapse-free survival in GIST patients.** Javier Pozas, The Royal Marsden	
12.30 - 12.40	**FREE PAPER - Updated overall survival and safety with ripretinib vs sunitinib in patients with advanced gastrointestinal stromal tumor previously treated with imatinib and harboring *KIT* exon 11 + 17/18 mutations: ctDNA analysis from INTRIGUE** Robin Jones, The Royal Marsden & Institute of Cancer Research	
12.40 - 12.50	**FREE PAPER - Heterogeneity of Platelet-Derived Growth Factor Receptor Alpha (PDGFRA) Non-D842V (Aspartate/Valine Substitution) Mutant Gastrointestinal Stromal Tumours (GISTs): Cambridge Experience.** Ramesh Bulusu, Cambridge University Hospital	
12.50 - 13.40	**Lunch and poster viewing**	

SESSION 9:	Tensynovial Giant Cell Tumour CHAIRS: TBC
	Gateshead Suite
13.40 - 14.10	**KEYNOTE - Tenosynovial giant cell tumour** Michiel van de Sande, Leiden University Medical Centre
14.10 - 14.20	**FREE PAPER - The Burden of Surgery for Tenosynovial Giant Cell Tumour: A Targeted Review** Brooke Harrow, Deciphera Pharmaceuticals
14.20 - 14.30	**FREE PAPER - Safety and efficacy with vimseltinib in patients with tenosynovial giant cell tumor who received no prior anti–colony-stimulating factor 1 therapy: ongoing phase 2 study** Mahbubl Ahmed, University College London Hospitals
14.30 - 14.40	**FREE PAPER - Updated efficacy and safety of vimseltinib in patients (pts) with tenosynovial giant cell tumor (TGCT): 1-year follow-up from the MOTION phase 3 trial** Sarah Pratap, Oxford University Hospitals
14.40 - 15.00	**Afternoon Refreshments & Poster Viewing**
SESSION 10	**Final updates, prizes and closing remarks**
	Gateshead Suite
15:00 - 15:10	**SAG chairs update** Anant Desai, University Hospitals Birmingham
15.10 - 15.20	**National Sarcoma Awareness Project** Corey Chan, Orthopaedic NIHR Academic Clinical Fellow, Newcastle Upon Tyne Hospitals
15.20 - 15.30	**Closing remarks and prizes** Adam Dangoor, President, BSG
15.30	**BSG 2025 Closes**

Posters

1. Exploring the relationship between ethnicity, and adherence to follow-up guidelines at Royal National Orthopaedic Hospital (RNOH) Sarcoma Service
Abigail McCarthy, Royal National Orthopaedic Hospital Stanmore

2. Three years embedding Treatment Review and Holistic Needs Assessment - What Have we Learned about Outcomes?
Abigail McCarthy, Royal National Orthopaedic Hospital Stanmore

3. OxPOS operational delivery experiences in a real-world prospective observational and sample collection study in high-grade sarcoma.
Adam Bekulart, Oxford University Hospitals NHS Foundation Trust

4. Empowering Change: The Role of Advocates in Improving Outcomes for Advanced Sarcoma Patients in Rural India
Aditya Manna, MAS Clinic & Hospital

5. OxPOS evaluation of germline and somatic VUS in high-grade sarcoma using AlphaMissense.
Andrew B Hassan, University of Oxford

6. OxPOS interim outcomes from a prospective germline exome sequencing panel in real-world high-grade sarcoma.
Andrew B Hassan, University of Oxford

7. State of the Nation: Initial Results from a Review of Sarcoma Services
Andrew French, Sarcoma UK

8. OxPOS pathway optimisation modelling for advanced sarcoma precision care: A scoping review
Apostolos Tsiachristas, University of Oxford

9. Applicability of Sarculator nomogram to prognose and stratify resected extremity soft tissue sarcoma patients in a UK cohort
Athul Dinesh, UCL Medical School, University College London

10. The Role of C-Reactive Protein in Predicting Postoperative Complications in Retroperitoneal Liposarcoma Resections
Aymerito F, Sarcoma Unit, Department of Surgery, Royal Marsden Hospital, London, UK.

11. Sarcoma UK Support Group Leaders Network Day and Development of the Sarcoma Support Groups
Carly McDonald, Sarcoma UK

12. The use of Sarcoma UK's Direct Referrals Service by the Swansea Sarcoma Nurse Team
Carly McDonald, Sarcoma UK

13. Pilot of Virtual Health and Wellbeing Information and Support (HWBIS) Programme with Sarcoma Patient Cohort
Carly McDonald/Helen Stradling, Sarcoma UK

14. A single centre experience of microvascular soft tissue transfer for reconstruction of the foot following sarcoma excision
Christie Brennan, North Bristol NHS Trust

15. Histologic & Prognostic Comparison Between Atypical Fibroxanthoma & Pleomorphic Dermal Sarcoma
Christopher Archer, School of Medicine, Dentistry and Biomedical Science, Queen's University Belfast

16. Evaluating Access and Benefits of Free of Charge (FOC) schemes for Sarcoma Patients at a Tertiary Care Centre

Clare Geoghegan, University College London Hospitals

17. A risk stratified approach to the management of doxorubicin related cardiotoxicity in patients with soft tissue sarcomas
Clare Gilson, Royal Marsden NHS Foundation Trust

18. Sarcoma Patients' Experiences of their Psychological Needs
Dr Christopher Meek, Nottingham University Hospitals NHS Trust

19. Survival outcomes in Ewing sarcoma: Leeds, United Kingdom
Dr Nicola Hughes, University of Leeds

20. Are all chondrosarcomas secondary? An evaluation of prior imaging and prodromal symptoms in presumed primary lesions
Elspeth Murray, NHS Greater Glasgow and Clyde

21. The implications of rising primary care referrals of urgent suspected sarcoma to a tertiary referral centre
Emilia Sykes, University of Aberdeen

22. The National Gastrointestinal Stromal Tumour (GIST) Tissue Bank
Eniola Ayeni, The Royal Marsden Hospital NHS Foundation Trust

23. A Review of the Inpatient Sarcoma Chemotherapy Service in the North East: Suggestions for Improvement
Hannah Hayhurst, Newcastle upon Tyne NHS Foundation Trust

24. Optimizing Management and Follow-Up of Atypical Fibroxanthoma and Pleomorphic Dermal Sarcoma in Elderly Patients: A Protocol from North Bristol Trust
Harry Whitehouse, Southmead Hospital, North Bristol Trust

25. The Sarcoma UK support line team work in new ways to support patients during the referral process
Helen Stradling, Sarcoma UK

26. Utility of 3-month surveillance scan following surgery for primary retroperitoneal sarcoma
Humaira Hussain, Queen Elizabeth Hospital, University Hospitals Birmingham NHS Trust

27. Post-Treatment Response Patterns in Quantitative MR Biomarkers in UPS and ML STS Subtypes
Imogen Thrussell, The Institute of Cancer Research, The Royal Marsden Hospital

28. Risk Factors for Reduced Physical Function and Health-Related Quality of Life following Lower Limb and Pelvis Bone Sarcoma Surgery
James M Gilling, Royal National Orthopaedic Hospital

29. Angiomatoid fibrous histiocytoma: a multicentre case series
Javier Pozas, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK

30. Ossifying fibromyxoid tumours: a case series
Javier Pozas, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK

31. Imatinib plasma trough level testing in Gastrointestinal stromal tumour (GIST) – potential benefits and cost implications in the age of generic imatinib
Jennifer Harrington, Cambridge University Hospitals NHS Foundation Trust

32. A systematic review exploring the post-surgical psychosocial needs of patients diagnosed with soft tissue sarcoma.
Jill Kennedy, South Eastern Health and Social Care Trust

33. Adult orthopaedic oncology multi-disciplinary team teaching for inpatient ward staff
Jilpa Modessa, The Royal National Orthopaedic Hospital

34. Patient feedback of the Prehabilitation pathway for the East Midlands Sarcoma Service
Jo Bacon, Nottingham University Hospitals NHS Trust

35. Improving the Biopsy Pathway for Sarcoma Patients
Joanne Coleman, Royal National Orthopaedic Hospital

36. A pilot survey of patient experiences of communication with healthcare providers in the diagnosis of musculoskeletal tumours
Joseph E McKay, Trauma & Orthopaedic Department, Glasgow Royal Infirmary

37. Analysis of postoperative complications following palliative resection of soft tissue sarcoma at East Midlands Sarcoma Service
Joshua Howard, The University of Nottingham, Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom

38. Real-World Efficacy and Toxicity of Cabozantinib in Sarcoma
Kabo Mohame, Queen Elizabeth Hospital Birmingham

39. Living with Sarcoma: What is the impact on daily life, activity participation and how to move forward? Prelimary Findings.
Kate Scanlan, Royal National Orthopaedic Hospital

40. Patient and clinician experience of integrating an advanced practitoner role into sarcoma clinical practice
Katy Ellis, University College London Hospital

41. OxPOS experience of real-world data integration with the navify® Clinical Hub for Tumor Boards
Kinga Varnai, Oxford University Hospitals NHS Foundation Trust

42. Audit of Radiotherapy Limb Immobilisation
Kirsty Thornton, Nottingham University Hospitals

43. 3D-modelling in planning surgery and analysing patterns of recurrence in maxillofacial osteosarcomas
Krupali Parikh, UCL

44. Evaluating Radiomic Feature Robustness for PET/CT Imaging in a Phantom and Sarcoma Patient Dataset
Lara Bonney, Sir William Dunn School of Pathology, University of Oxford

45. OxPOS functional 18FDG-PET-CT radiomics for the evaluation of metabolic heterogeneity in high grade sarcoma.
Lara Bonney, UNIVERSITY OF OXFORD

46. Can group physical activity classes reduce isolation and increase physical well-being in patients with Sarcoma?
Laura Mitham, Royal National Orthopaedic Hospital

47. OxPOS synthesis of Patient and MDT Team Communication Strategies in Advanced Sarcoma Care
Lisa Hinton, UNIVERSITY OF OXFORD

48. Prehabilitation in extremity soft tissue sarcoma – opportunities and benefits: A

case study.
Lucy Dean, The Royal Marsden Hospital

49. The Redevelopment of Sarcoma Service Referral Pathways at Nottingham University Hospitals NHS Trust
Lynsey Green, Nottingham University Hospitals NHS Trust

50. An in-vitro investigation of 5-Aminolevulinic acid mediated photodynamic therapy in soft-tissue sarcoma
Marcus Brookes, The Newcastle upon Tyne Hospitals NHS Foundation Trust

51. Biodegradable temporising matrix (BTM) for the reconstruction of soft tissue defects following the resection of soft tissue sarcoma
Marcus Brookes, The Newcastle upon Tyne Hospitals NHS Foundation Trust

52. Audit into Radiotherapy start times for patients with Ewing Sarcoma at the Christie proton centre
Mark Reed, The Christie NHS foundation Trust

53. Can we streamline the Welsh Sarcoma Service from point of suspicion to first Sarcoma MDT?
Miss Sophie Mundell, Swansea Bay University Health board

54. The Role of Chest X-Rays in Detecting Sarcoma Metastases: An Audit from a UK Sarcoma Centre
Mr. Stuart Mckirdy, LTHTR/RPH

55. Surgical limits of Limb Salvage in lower limb sarcoma excision: A Retrospective Review of Patients
Ms Kristine Joyce Cadiz BSPh, MD, MRCS, MChT Surgery,, North Bristol Trust

56. Complex Reconstruction and Neoadjuvant Strategies in Chest Wall Sarcomas: A Case Series from a Tier-II City in India
Nawaz Usman, Kasturba Medical College, Manipal

57. Mesenteric fibromatosis: a call to arms or one for restraint?
Nawaz Usman, Kasturba Medical College, Manipal

58. mandibular metastases as first presentation of metastatic leiomyosarcoma. Review of 2 cases
Parth Tagdiwala, University College London Medical School

59. Mixed methods study evaluating teenage and young adults with cancer care in the UK: BRIGHTLIGHT_2021
Rachel Taylor, University College London Hospitals NHS Foundation Trust

60. Anatomical Location of Gastric GISTs & Mutational Status
Ramesh Bulusu, Cambridge University Hospitals

61. An in vitro investigation of 5-aminolevulinic acid mediated photodynamic therapy in bone sarcoma
Rebecca Maggs, Newcastle University

62. Investigating chordoma incidence, survival and management using national cancer registry data
Reuben Hastings, UCL Cancer Institute; NHS England

63. First Contact MSK Practitioners and recognition of sarcomas: A survey
Rob Turner, Leeds Teaching Hospital NHS Trust

64. Improving the patient experience of male patients receiving radiotherapy to the proximal lower limb by using a new specially designed immobilisation device: "Ting-Sling (TS)
Rosemary Muk Ting, Royal Marsden Hospital

65. Imaging of myxoid lesions: Challenges and tips to tackle them
Ruchi Gandecha, University Hospitals Leicester

66. Long-term follow-up and late effects services for UK primary bone cancer patients: a service mapping exercise
Ruth Eldershaw, Bone Cancer Research Trust

67. Comparative accuracy of core-needle and open biopsy in diagnosis, subtyping, and grading of head and neck bone and soft tissue sarcomas.
S Golnaz Sadeghian B, University College London Hospital NHS Foundation Trust

68. The role of NGS application in the diagnosis and treatment of Head and Neck sarcoma cases
S Golnaz Sadeghian B, University College London Hospital NHS Foundation Trust

69. Functional Bipolar Latissimus Dorsi Bicep Reconstruction Following Sarcoma Resection in the Elderly
Samantha Leong, Southmead Hospital, Bristol

70. Advancing Bone Cancer Advocacy: Insights from the Bone Cancer Research Trust's Awareness Survey
Silvia Kraft, Bone Cancer Research Trust

71. Bridging the Knowledge Gap in Sarcoma: An overview of the National Sarcoma Awareness Project's impact on Medical Education
Silvia Kraft, Bone Cancer Research Trust

72. Metastatic Spindle Cell Sarcoma of the Prostate: A Rare Case of Long-Term Survival
Sindhu Retnabai, The Christie Hospital NHS Trust

73. Effectiveness of abductor mechanism repair using GT washer in proximal femur replacements with Endoprosthesis reconstruction
Tareq Altell, Glasgow Royal Infirmary

74. OxPOS economic models of sarcoma care: a systematic review and avenues for future research
Teodoro D'Agostino, Nuffield Department of Primary Care Health Sciences, University of Oxford

75. Atypical fibrous histiocytoma and rare metastatic malignant transformation
Tuba Khan, Lancashire Teaching Hospitals NHS Foundation Trust

76. Bone Cancer Research Trust - Review of the Support Service
Vina Dahya, Bone Cancer Research Trust

Thank you to our **Sponsors**

Platinum Sponsor

deciphera®

A member of ONO Pharma

Stand 6 & 7

Deciphera Pharmaceuticals, a member of ONO Pharmaceutical, is a biopharmaceutical company focused on discovering, developing and commercializing important new medicines to improve the lives of people with cancer.

We are leveraging our proprietary switch-control kinase inhibitor platform and deep expertise in kinase biology to develop a broad portfolio of innovative medicines.

www.deciphera.com

Gold Sponsor:

SpringWorks™ THERAPEUTICS

SpringWorks is a biopharmaceutical company that develops and commercializes life-changing medicines for people with severe rare diseases and cancer.

OGSIVEO® (nirogacestat), approved in the U.S. for adults with progressing desmoid tumors who require systemic treatment, is the Company's first approved therapy.

SpringWorks also has a diversified pipeline spanning solid tumors and hematological cancers.

www.springworkstx.com

Exhibitors:

Immedica pharma

www.immedica.com

Stand 3

PolyNovo

Improving outcomes. Changing lives.

www.eu.polynovo.com

Stand 4

PROTON INTERNATIONAL at UCLH

www.protonintlondon.com

Stand 5

SERB Pharmaceuticals

www.serb.com

Stand 2

Sovereign Medical GROUP

www.sovereignmedical.co.uk

Stand 8

Takeda ONCOLOGY

www.takeda.com

Stand 1

Thank you to our Charity Partners:

BONE CANCER RESEARCH TRUST UNTIL THERE'S A CURE

Stand 9

Established in 2006, the Bone Cancer Research Trust is now the leading charity dedicated to fighting primary bone cancer. Based in Leeds, the charity's mission is to save lives and improve outcomes for people affected by primary bone cancer through research, information, awareness and support.
www.bcrt.org.uk

Sarcoma UK The bone & soft tissue cancer charity

Stand 10

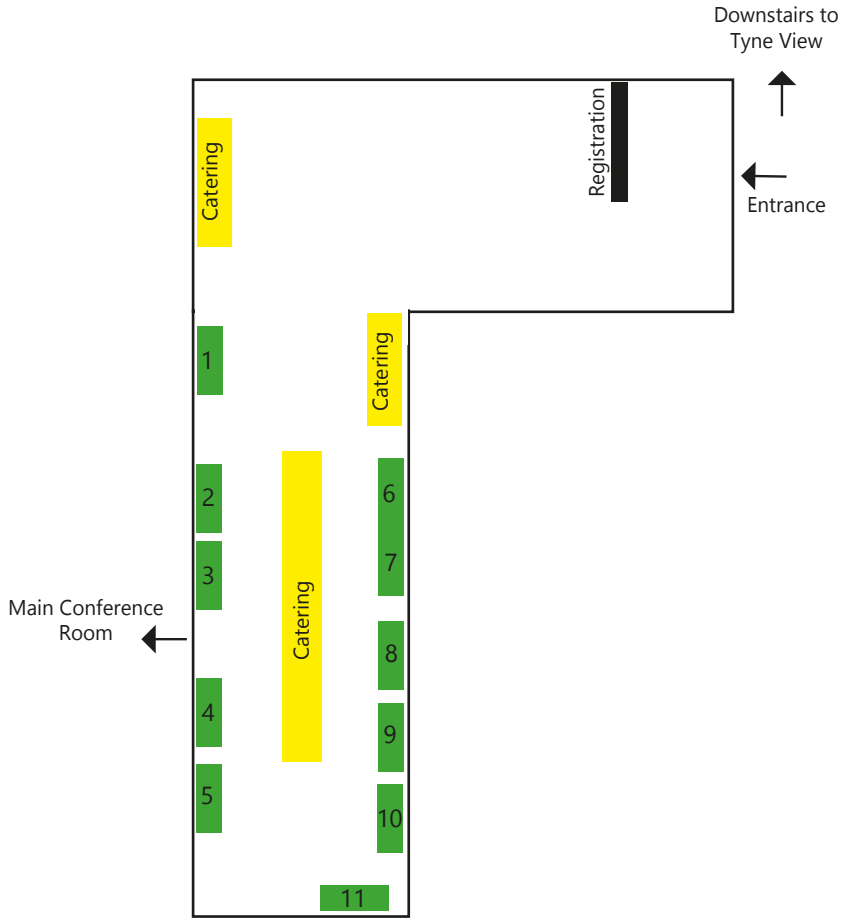
Sarcoma UK is a national charity that funds vital research, offers support for anyone affected by sarcoma cancer and campaigns for better treatments. It is the only cancer charity in the UK focusing on all types of sarcoma.
www.sarcoma.org.uk

gist cancer uk

Stand 11

We are the only UK charity focusing solely on GIST cancer. Our charity is run by volunteer trustees who are patients and their family and friends. Our focus is to: Support Gist Patients, Provide Information And Education, Raise Awareness, Raise Funds, Provide Grant Funding, Stimulate Research For A Cure
www.gistcancer.org.uk

Exhibitor Floorplan



1.	Takeda	6 & 7	Deciphera Pharmaceuticals
2.	SERB Pharmaceuticals	8.	Sovereign Medical Limited
3.	Immedica Pharma	9.	Bone Cancer Research Trust
4.	PolyNovo	10.	Sarcoma UK
5.	Proton International London	11.	Gist Cancer UK

Abstracts - **Free Papers**

Day One: 10.00 - 10.10

Change Proposal for Initiating Patient-Initiated Follow-Up – Desmoid Fibromatosis

Ariana Barradas da Silva, University College London Hospital; Katy Ellis, University College London Hospital; Alexandra Palmer Makowski, University College London Hospital; Kostis Efthymiadis, Michael Montemurro, Franel Le Grange, Vasilios Karavasilis - University College London Hospital

Introduction Desmoid fibromatosis (DF) is a rare, non-metastasising soft tissue tumour that often requires prolonged follow-up, posing challenges for both patients and healthcare providers. Current follow-up models involve frequent clinic visits and imaging, contributing to patient burden and resource constraints. This proposal explores implementing a patient-initiated follow-up (PIFU) model for DF patients, aiming to enhance patient autonomy and optimise resource use. Method A review of retrospective data from an Italian Cohort as well as prospective clinical trial data from the Dutch GRAFITI study, looking at active surveillance in non-abdominal desmoid tumours, demonstrated that most patients will not require an active treatment, as they have stable or regressive disease for a period of 3 years. Therefore, this can set the scene for the proposed PIFU criteria. Patient eligibility includes extra abdominal disease, easily assessable disease without images, stable disease after three years of active surveillance, adequate health literacy, and the ability to self-manage. Under the PIFU framework, patients would arrange follow-ups as required within a structured 10-year surveillance period. The model aligns with NHS England's personalised care agenda, utilising educational tools and direct appointment booking systems to support patient autonomy. Results Evidence suggests that DF patients under surveillance beyond three years can safely transition to PIFU, reducing unnecessary clinic visits and psychological distress. PIFU optimises resource allocation, empowers patients, and ensures effective disease monitoring without compromising recurrence detection. This tailored approach enhances patient satisfaction and healthcare efficiency, alleviating logistical and administrative burdens. We are planning to initiate 42 patients on PIFU. This will represent a total saving of 267 follow-up appointments, equating to 134 hours of consultant time. We will audit our PIFU data prospectively within a period of 2 years and we will look for recurrences or misses and we will review the policy again. Conclusion Adopting a PIFU model for DF patients presents a patient-centred solution to current challenges. It aligns with NHS England's goals for personalised care, offering potential to improve outcomes and optimise resource use. Future steps include pilot implementation and evaluation.

Day One 10.10 - 10.20

Systemic treatment of Desmoid Tumours: A single centre study, Leeds, UK

Dr Nicola Hughes, University of Leeds; Dr Eliot Leonard, Leeds Cancer Centre; Dr Jane Hook, Leeds Cancer Centre; Professor Dan Stark, University of Leeds Dr Fei Sun, Leeds Cancer Centre Dr Rob Turner, Leeds Cancer Centre

Introduction: Desmoid tumours are rare with an incidence of 2 to 6 per million of the population per year. Although they lack malignant potential, they can have a significant impact on quality of life causing pain and impairing function. Treatment options range from observation and supportive measures to surgery. Some patients receive systemic treatment with anti-cancer agents. Methods: We have reviewed the treatment experiences of patients who received systemic treatment for a Desmoid tumour, identified from electronic SACT prescriptions, in a specialist sarcoma centre in Leeds, UK between January 2014 and October 2024. Results: Twenty patients met the inclusion criteria, with 3 receiving

2 lines of systemic treatment. Vinorelbine and methotrexate was given to 3 patients, 1 received vincristine and methotrexate, 2 liposomal doxorubicin, 3 sorafenib, 6 tamoxifen and 8 oral vinorelbine. Median age at diagnosis was 37.5 years (range 18-67). Median time from diagnosis to starting systemic treatment was 11 months (range 1-48). Four patients had an associated FAP mutation. All had a performance status of 0 or 1. Partial radiological response was seen in 5 cases, stable disease in 12 and progression in 6. Symptomatic response was reported to 6 treatments, in 7 cases the pain became worse and in 10 no change. Eight patients had grade 1 toxicity from treatment, one grade 3 and in 5 cases treatment was stopped due to toxicity. No patients died. Conclusion: We describe the toxicity experienced and responses achieved by patients treated in our centre. This will inform future treatment decisions and discussions with patients.

Day One: 10.20 - 10.30

Optimizing Desmoid Fibromatosis Management: 14-Year Outcomes of Conservative vs. Surgical Approaches at Glasgow Royal Infirmary

Vidhi Saraf, University Of Glasgow; Sanjay Gupta, Glasgow Royal Infirmary; Mr Hariharan TD, Glasgow Royal Infirmary; Ashish Mahendra Sarah Vaughan

Introduction Desmoid fibromatosis is a locally aggressive connective tissue tumour with an unpredictable clinical course. While surgery was once standard, current European guidelines recommend active surveillance as the primary approach. However, some patients still require surgery, making it essential to evaluate outcomes of surgical versus conservative treatments to enhance patient care. Objectives ?To compare the effectiveness of the 'watch and wait' approach versus surgical intervention in the management of desmoid fibromatosis, including recurrence statistics for each treatment strategy. ?To assess the importance of ongoing symptom monitoring and explore if patients can be safely discharged after initial diagnosis. ?To identify reasons for surgical intervention despite guideline recommendations, considering factors like tumour location, size, symptoms, and patient preference. ?To evaluate follow-up duration and the average number of scans conducted per patient, with an aim to understand the financial impact of prolonged surveillance. Methodology, This retrospective cohort study examined 101 desmoid fibromatosis patients from 2010 to 2024 at the MSK Oncology Service, Glasgow Royal Infirmary. Data collected included demographics, referral times, biopsy dates, treatment initiation, imaging intervals until tumour regression, follow-up duration, intervention types, recurrence rates, and discharge timelines. For surgical cases, secondary procedures and recurrences were noted. All data was systematically organized and analysed to assess adherence to European guidelines. Results • Patient Demographics: Among 101 patients, 34 were men and 67 were women, reflecting higher prevalence in women. • Tumour Location: Highest prevalence in limb girdles- 30 upper limb, 40 lower limb, and 31 torso. • Diagnosis and Imaging: Diagnosis confirmed by biopsy and MRI for all patients; average referral-to-diagnosis time was 1 week • MRI Role: MRI was essential for diagnosis and surgical planning, with an average of 3.1 scans per patient. •Recurrence and Treatment: 8 patients experienced recurrence; 6 had surgical excision (3 re-excisions, 1 above-knee amputation). •Surgical intervention factors: suspected low-grade myxoid sarcoma, recurrence, incomplete surgeries. •8 patients received radiotherapy alone; 2 received surgery plus radiotherapy. •Recurrence Risk: Per European guidelines, recurrence risk is similar for radiotherapy alone (23%) and surgery with radiotherapy (22%). Conclusion ?Our findings support a conservative 'watch and wait' approach for most desmoid fibromatosis cases, consistent with European guidelines. Initial MRI and follow-up imaging were conducted as per protocol, but adherence to the full 5-year follow-up decreased among asymptomatic patients, who generally returned only with symptom progression. Our study indicates that routine long-term follow-up may be unnecessary for asymptomatic patients, provided they have access to specialist care

if symptoms recur, as no cases showed malignant transformation. ?This approach could reduce unnecessary clinical visits and imaging, conserving healthcare resources while preserving quality of care. For instance, the current follow-up protocol involving 13 MRI scans per patient over 5 years costs approximately £1,690 per patient, translating to £170,690 for the 101 patients in our study. By discharging patients upon diagnosis and reserving imaging for symptomatic cases, these costs could be significantly reduced, saving an estimated £1,690 per asymptomatic patient. ?In the NHS, where each consultant appointment averages £150, streamlining follow-up for stable cases offers potential cost savings and optimizes resource allocation. Our findings advocate for individualized follow-up strategies to balance clinical need with economic efficiency.

Day One 14.20 - 14.30

A model of an Orthopaedic Oncology clinic: A soft tissue centre and patients' perspective.

Debbie Artis, Leeds Teaching Hospitals; Michael Parry, The Royal Orthopaedic Hospital Birmingham;

Introduction: In 2006, NHSE deemed the management of primary malignant bone tumours (PMBT) a specialised commissioned service resulting in centralisation of pathways for management to designated centres. The provision of PMBT services for the Yorkshire region is coordinated through the regional MDT based at the Royal Orthopaedic Hospital, Birmingham. To improve patient experience particularly in follow up, the ROH has provided an outreach clinic on a 3 monthly basis, coordinated by a specialist sarcoma physiotherapist based at the regional oncology centre, in Leeds, and delivered by a surgeon from the supra regional centre and a specialist sarcoma physiotherapist. The aim of this audit was to assess patient reported outcomes, including patient satisfaction, with a specific focus on the benefit considered by patients of providing specialist follow up at their regional oncology centre as opposed to the supra regional surgical centre. Method: Patients attending the clinic were asked to complete a questionnaire at the time of their appointment. The questionnaire included patient details, such as postcode, diagnosis, and frequency of appointments. The patient perceived benefit of the clinic was recorded based on a Likert scale. Patients were asked to describe positive or negative aspects of the clinic experience, and any changes they would make. Patients were also asked specifically on the perceived benefit of having a physiotherapist in attendance. Results: 34 out of 50 questionnaires were returned (68%) for a 9-month period, comprising 3 sequential clinics. Based on the patient's postcode, the median time and distance to Leeds was 30 miles and 35 minutes, which compared to an estimated time and distance travel to Birmingham of 175 miles and 2 hours and 59 minutes. 79% of patients had visited the clinic between 1-10 times with 21% between 11-20 occasions, with the spread of scheduled follow up from 3 monthly (24%), 6 monthly (26%), annually (24%) and 2 yearly (18%). Overall, 91% of patients found attending Leeds very or extremely beneficial. Patients overwhelmingly preferred the shorter travel time when compared to travel to Birmingham for ongoing surveillance. Out of 27 respondents as to whether they find having a specialist sarcoma Physiotherapist present 68% said yes. Negative feedback of the clinic experience was reported by 9% of respondents, and all related to delays in x-ray times. Discussion: The provision of an outreach clinic to support patients treated for PMBT at a supra regional centre is acceptable and favourable to patients. The benefit to patients included reduced travel times and distances to travel. The provision of a specialist sarcoma physiotherapist was favourable to patients. The coordination of care between supra regional and regional services can be achieved through the provision of outreach clinics for the benefit of the patient.

Day One: 14.30 - 14.40

A large single center retrospective analysis of surgery for extremity, non-coelomic

leiomyosarcoma (LMS) –low rates of adjuvant radiotherapy is still associated with excellent local control.

Jens Stroehaker, Royal Marden NHS Foundation Trust; Andrew Hayes, Royal Marden NHS Foundation Trust; Myles Smith, Royal Marden NHS Foundation Trust; Aisha Miah Royal Marden NHS Foundation Trust Shane Zaidi Royal Marden NHS Foundation Trust Dirk Strauss Royal Marden NHS Foundation Trust

Background and Methods. A retrospective single-centre analysis (2000-2023) of 137 adult patients undergoing surgery for extremity LMS (excluding cutaneous, arterial and coelomic LMS) was performed . Results. 137 patients were identified. Median follow up was 47 months. Median age was 68 years (56% male v. 44%F female). 6% presented with synchronous metastases. Median diameter was 56mm (range 10–185mm). 18% of cases were underwent inadvertent excision elsewhere, the remainder were diagnosed by core-needle biopsy. 81.8% were in the leg, 12.4% the arm and 5.8% the trunk. 50% arose from the saphenous vein or side branch. 7.3% received neoadjuvant radiotherapy (RT) 1.5% had neoadjuvant ILP (plus post op RT) and 17% had post op RT. Grade was G1 in 16.8%, G2 in 44.5% and G3 in 38.7%. The local resection was complete (margin ? 1mm) in 66.4% and marginal (margin < 1mm) in 32.8% (1 case unknown). Local recurrence occurred in 6.6%. The total metastatic rate (including synchronous metastases) was 35.0%. The 5-year overall survival was 100% for G1, 79% for G2 and 40% for G3. Conclusions. Unlike many others sarcoma subtypes, planned oncological surgery for LMS even with close margins is associated with excellent local control with no adjuvant treatment but distant metastasis rates are high. The decision to omit preoperative RT must be made as a joint multidisciplinary decision by surgical and clinical oncology as though surgery alone may avoid significant morbidity especially in groin and thigh LMS, a significant minority of patients will still need post op RT.

Day One 14.40 - 14.50

Phase II prospective trial of intensity modulated radiotherapy (IMRT) in primary bone sarcomas, and dosimetric comparison with proton beam therapy (PBT)

Beatrice Seddon, University College London Hospitals NHS Foundation Trust; Will Wilson, Cancer Research UK and UCL Cancer Trials Centre, London; Franel Le Grange, University College London Hospitals NHS Foundation Trust; Andrew Gosling, University College London Hospitals NHS Foundation Trust Vossco Nguyen, University College London Hospitals NHS Foundation Trust Shumona Shelly, Cancer Research UK and UCL Cancer Trials Centre, London Sharon Forsyth, Cancer Research UK and UCL Cancer Trials Centre, London

Introduction: The aim was to establish if IMRT for primary bone sarcomas of the pelvis and spine would achieve the required RT doses to tumour, and to compare IMRT dosimetrically with PBT. Methods: Cohort 1: Ewing's sarcoma spine/pelvis receiving pre-operative IMRT 50.4Gy/28#, and post-operative or definitive IMRT 54Gy/30#. Cohort 2: Non-Ewing's primary bone sarcomas spine/pelvis receiving definitive IMRT 70Gy/35#, and post-operative IMRT 60Gy/30#, or 70Gy/35# (chordoma). Primary endpoints: Cohort 1: proportion of patients in whom 90% of planPTV receives 95% of optimal prescription dose. Cohort 2: proportion of patients in whom 80% of planPTV receives 95% of optimal prescription dose. These estimates were derived from dosimetric data from historical patients receiving IMRT at a single centre, and were judged to be clinically meaningful. PBT plans were produced for dosimetric comparison. Results: Twenty-one patients were registered and evaluable. Cohort 2 histologies were chondrosarcoma, chordoma, leiomyosarcoma, mesenchymal chondrosarcoma, osteosarcoma. In cohort 1, 9/9(100%) of patients had plans in which ?90% of planPTV received D95% of optimal prescription dose. In cohort 2, 9/12(75%) of patients had plans in which ?80% of planPTV received D95% of optimal prescription dose. PBT plans were very similar to IMRT plans for delivering optimal dose to planPTV. However, PBT achieved significantly lower doses to organs-at-risk (OAR) for cohort 1 (bowel space, integral dose) and cohort 2 (bowel space, bladder, cauda equina, integral dose). Conclusions: IMRT was effective in delivering optimal dose to planPTV. Comparative PBT plans showed superiority over IMRT in reducing dose to OARs and integral dose.

Day One: 14.50 - 15.00

Optimizing Referral pathways for Sarcoma Patients: A Clinical audit of the Faster Diagnosis framework

Sian Alsousou, University Hospitals of Liverpool; Qi Yin, University Hospitals of Liverpool; Coonoor Chandrasekar, University Hospitals of Liverpool; Kathryn Jones University Hospitals of Liverpool Sarah Massey University Hospitals of Liverpool Dr SowmyaShri GV University Hospitals of Liverpool

Introduction Soft tissue Sarcomas (STS) remain one of the rarest cancers diagnosed in the UK. NG12 NICE guidelines underpinned the value of primary-care diagnostics to reduce the numbers of referrals to cancer pathways. E-referral systems enable triaging patients who had community Ultrasound. This study aim was to evaluate the impact of primary imaging pathway on sarcoma regional referrals. Methods This is a retrospective analysis of all patients attending sarcoma clinic over a six-month period before and after the implementation of the imaging pathway. All patients referred and attended face-to-face clinics were included. Patients who did not attend were excluded. Results 394 and 367 patients were referred before and after the new pathway respectively. (43.3% females, 56.7% males, Mean age 56 years ± SD 17.1). 10.1% were sarcoma in the first period versus 9.6% in the second period. 69.2% referred as GP-Urgent cancer pathways. Only 8.3% of these were diagnosed with a malignancy. The New pathway has significantly improved obtaining imaging prior to clinic from 59.64% to 92.4% (chi-square test is 240.6 and p value is <0.0001). 8.9% were discharged after their first appointment. 20.9% required clinical surveillance. 28.9% did not require immediate treatment. 37.4% required further investigations, which was reduced when compared to the older pathway. Conclusion There has been a seven-fold increase in the numbers of patients referred with prior imaging. This allows for a quicker diagnostic phases for all patients. Implementation of imaging prior to refer leads to significant in improvement in faster diagnosis service.

Day One 14.50 - 15.00

Establishing an MR Planning scan Service for Sarcoma Radiotherapy

Stefanie Thomson, NHS GGC; Sharon Cave, NHS GGC

Using diagnostic MR images to outline target volumes for sarcoma radiotherapy poses several challenges and limitations. These images are typically not acquired with radiotherapy planning in mind. For instance, they may not be taken in the correct treatment position or acquisition angle, could consist of thick slices that lead to partial volume effects, and often lack the necessary geometric fidelity due to the absence of distortion corrections. Additionally, the anatomical coverage may be insufficient for accurate registration, and distortions in the body contour can occur from coil placement. Furthermore, the imaging sequences are usually not fully optimized for radiotherapy. All of these factors can compromise the accuracy of image registration with the planning CT. In this presentation, we will explore our multidisciplinary team approach to setting up an MR planning scan service for Sarcoma radiotherapy on the dedicated MR-RT simulator installed at the Beaton West of Cancer Centre in October 2021. This service enables us to scan patients in their radiotherapy treatment position. We will discuss key topics such as patient setup and immobilisation, sequence optimisation, requirements for an accurate image registration and the excellent image quality, without the need for administering contrast, which we can achieve for Sarcoma patients, which in

turn enhances the accuracy of target volume outlining. Furthermore, we will emphasize the importance of effective communication among all involved teams, including Mould Room, CT & MR, Imaging RT Physics, Treatment Planning, and Clinical Oncology, as this collaboration has been vital to the success of our service.

Day One: 15.30 - 15.40

The Cancer Pathway Navigator Role

Hannah Hilton, North Bristol Trust; Rebecca Peach, North Bristol Trust; ,

North Bristol Trust (NBT) have been involved in the pilot, and subsequent employment of a fixed term cancer pathway navigator into their sarcoma soft tissue service. This is a relatively new role that has been rolled out across all cancer care departments, nationally, to help facilitate a patient's journey – from detection, to diagnosis, through treatment and beyond. Nationally, the role rationale is to act as a key point of contact and representative for patients, families and carers. By acting as a key point of contact, the navigator works closely with the sarcoma CNS team to track each patient's pathway and to flag up any delays. The sarcoma pathway navigator poster covers: (i) How the role of a cancer pathway navigator fits into the NBT sarcoma soft tissue MDT. (ii) The benefit of a sarcoma pathway navigator to the soft tissue service and patient care. Tracking and acting upon scan reports appropriately. Flagging urgent action to consultants and wider MDT at an earlier stage. (iii)The co-ordination of role development, patient pathway improvement and service improvement. The role has had a positive impact on patient care and experience, reducing the time that patients are waiting for scan results, reducing associated anxiety, and promoting a streamlined communication pathway between patient and clinical team. As this role is newly implemented within the NHS and is one that is not consistently employed across all sarcoma services, NBT would like the opportunity to present the need for a cancer pathway navigator within the sarcoma MDT.
Day One: 16.50 - 17.00

Day One: 16.40 - 16.50

Impact of whole genomic sequencing on diagnosis and prognosis of 120 patients with bone and soft tissue sarcomas at the Oxford Sarcoma Service 2021-2024.

Katie Herbert, Oxford Cancer & Haematology Centre, Oxford University Hospitals NHS Trust; Jennifer M Brown, Department of Histopathology, NOC, OUH NHS Trust, Oxford; Sarah Pratap, Oxford Cancer & Haematology Centre, Oxford University Hospitals NHS Trust; Jonathan Williams, Oxford Genetics Laboratories Joana Costa Ribeiro, Oxford Genetics Laboratories Ellen Higgs, Oxford Genetics Laboratories Maite Cabes, Oxford Genetics Laboratories Treena Cranston, Oxford Genetics Laboratories Leonidas Mavroeidis, Oxford Cancer & Haematology Centre, Oxford University Hospitals NHS Trust Zsolt Orosz, Department of Histopathology, NOC, OUH NHS Trust, Oxford

The Oxford Sarcoma Service is a tertiary referral centre with 700 new cases of bone and soft tissue sarcoma annually. Following NHSE policy, whole genomic testing (WGS) was implemented in 2021 for patients with new or recurrent sarcoma. WGS analysis offers the unique opportunity to identify germline mutations and mutational signatures that may inform tumour prognosis and therapeutics. Methods 122 specimens were obtained from 120 bone and soft-tissue sarcoma patients aged 1-83 yrs between October 2020 and September 2024. 104 specimens were analysed by WGS (13 failed QC, 5 deaths); output included somatic and germline variants, tumour mutational burden, gain and loss of oncogenes and tumour suppressors. Results WGS analysis confirmed existing NGS panel and cytogenetic results (n=35). Novel driver variants (n=5) and germline variants (n=5) were identified. 19 had alterations associated with homologous recombination deficiency (HRD). 9/19 patients are alive on surveillance or active treatment. 10/19 patients died prior to HRD-targeted treatment, due to lack of available trials or compassionate access schemes. 1 patient with Osteosarcoma had loss of mismatch repair deficiency genes. This

patient was recruited to two immunotherapy-based trials with an overall survival of 25.7 months. Conclusion Pairing patients with targeted treatment requires identification of a relevant mutation, with available treatment at a time when the patient is fit enough to benefit. Mutations which are currently non-actionable can be used to inform future trial design. In Oxford, WGS analysis has proved to be an invaluable tool enabling us to identify new mutations, refine histological diagnoses and identify therapeutic and prognostic markers for our patients with this challenging disease.

Day One: 16.50 - 17.00

HOPE for Intrahepatic Leiomyosarcoma Resection – A Case Report

Ruth Owen, Freeman Hospital; Emmanouil Psaltis, Freeman Hospital; Bhargav Chikkala, Freeman Hospital Jeremy French, Freeman Hospital Derek Manas, Freeman Hospital Steve White, Freeman Hospital Rodrigo Figueiredo, Freeman Hospital

Introduction: Primary leiomyosarcomas of the IVC are rare and have a poor prognosis due to late-stage diagnosis resulting from their insidious growth. Case Presentation: A 39-year-old woman was referred with a 60x60x48mm right upper quadrant mass. Imaging revealed an ill-defined mass originating from the IVC and invading into segments 5, 7, and 8 of the liver. Biopsy confirmed high-grade leiomyosarcoma. The multidisciplinary team (MDT) proposed either palliative chemotherapy or radical surgery. The patient chose radical surgery. The liver was perfused ex-vivo using hypothermic oxygenated machine perfusion (HOPE) whilst the tumour was resected on the back bench. The rationale was to provide adequate time to achieve clear margins. The patient was adequately counselled for this high-risk novel procedure. Discussion: Ex-vivo liver resection with auto-transplantation was pioneered by Rudolf Pichlmayr in 1988. This technique involves removing the liver and corresponding IVC segment entirely, with the tumour resected as a back-bench procedure. Since its inception, similar techniques have been reported globally. This case represents the first Zone II-III leiomyosarcoma resection using ex-vivo liver resection on machine perfusion with liver auto-transplantation. Machine perfusion is known to improve preservation of the liver ex-vivo when compared to static cold storage improving the safety of the procedure. Outcome: The patient recovered well post-operatively. At the most recent follow-up clinic visit (7-months post op), a CT scan showed no evidence of disease recurrence.

Day One 17.00 - 17.10

Oxford Precision Oncology for Sarcoma (OxPOS), a prospective observational and data integration cohort for sarcoma care innovation.

Andrew B Hassan, UNIVERSITY OF OXFORD;

The comprehensive sarcoma centres in the UK have drawn together critical mass within sarcoma teams and provided the centralisation of patient care. With this structure comes the expectation for innovation in sarcoma, with excellent recent independent examples in relation to diagnostic genome sequencing, clinical trials and imaging. There remains, however, a lack of integration across domains sustaining the overall innovation momentum, such as in sarcoma specific target discovery. Here, I share reflections on the Oxford Precision Oncology for sarcoma, a prospective real world observational study of 200 patients with high grade sarcoma diagnosed and treated in one centre, that attempts at bringing together such innovation. The principle is to try and understand how to hard wire innovation in this 'sandbox'. Our initial aim was to integrate incremental improvements across the sarcoma domains to create an overall step change. These domains are described in submitted OxPOS abstracts. Central to the approach is a sustainable and scalable cloud based digital solution linked to EPR that acts to facilitate MDT data flows and patient care. With test solutions in place, we have taken forward germline susceptibility variant panel testing, somatic sequencing and VUS, 18FDG PET-

CT radiomics, health economic assessments, patient and family data virtual clinics, patient and MDT communication support tools and LLM models. This model may inform a national sarcoma digital based care network to automate sample procurement, patient reported outcomes, economics of care, clinical trial innovation and recruitment, n=1 clinical experience reporting and a dashboard monitoring of care performance.

Day One: 17.10 - 17.20

An international, multi-centre study of surgical margins in intermediate to high grade sarcoma

Marcus Brookes, The Newcastle upon Tyne Hospitals NHS Foundation Trust; Corey Chan, Newcastle University; Kenneth Rankin, The Newcastle upon Tyne Hospitals NHS Foundation Trust; Timothy P Crowley, Maniram Ragbir, Iain Anderson, Kanishka Ghosh, Thomas Beckingsale

Introduction Sarcomas are rare, aggressive cancers arising from mesenchymal tissues. Surgical resection with a negative margin typically forms the cornerstone of surgical management, with positive margins associated with increased local recurrence (LR). Most studies include all sarcoma subtypes as a single entity and fail to appreciate the diverse characteristics of various histological subtypes. Methods Patients treated for intermediate to high grade sarcomas at 5 centres from 3 countries between 01/01/2010 and 31/12/2015 were included in the study. Patients with visceral, retroperitoneal and intracranial tumours were excluded. Positive margins were defined as microscopic tumour at the inked margin. Statistical analysis was performed using R Studio. Results 1510 patients were identified as suitable for inclusion. The positive margin rate was 17.6% and LR rate 10.7%. Overall, positive margins were associated with increased risk of LR (HR=3.59, p<0.0001). Both the positive margin and LR rates varied greatly between subtypes (Margins – 48.9% dedifferentiated liposarcoma vs 4.6% osteosarcoma, LR = 23.2% angiosarcoma vs 3.5% leiomyosarcoma). The relationship between positive margins and LR varied between subtypes; only Myxofibrosarcoma, UPS, Angiosarcoma and Osteosarcoma reaching significance (p<0.05). Despite having the highest positive margin rate (48.9%), dedifferentiated liposarcomas had a local recurrence rate of only 6.7%. Conclusion This large-scale (>1500 patient), multi-centre study shows that subtypes of sarcomas need to be treated separately, and their surgical management should not be uniform. The importance of positive margins varies greatly, and the aggressiveness of management should be considered accordingly. Collaborative research is required to achieve large datasets in small subtypes.

Day One 17.20 - 17.30

Investigating Ewing sarcoma incidence, survival and management using national cancer registry data

Reuben Hastings, UCL Cancer Institute; NHS England; Carolynn Gildea; Emily Jones; Sandra J Strauss

Objective The University College London – National Disease Registration Service (NDRS) partnership is investigating Ewing sarcoma (ES) management and outcomes in England using national registry data. Methods The incidence and survival of all ES registered in England between 1996 and 2020 were analysed. Treatment information was available 2013-2022 and consisted of chemotherapy, surgery and radiotherapy. Proton Beam Therapy (PBT) data were not complete 2019-2022. Results Between 1996-2020, 2,518 patients were diagnosed with ES; an average of 101 per year. Age-standardised incidence 2016-2020 was the same as in 1996-2000 (1.8 per million persons). Kaplan Meier 5-year overall survival (OS) increased from 48.4% (95% CI: 44.1-53.0) to 54.0% (95% CI: 50.1-58.3) between 1998-2002 and 2013-2017 (p = 0.008). Over the same period, OS improved significantly for pelvic ES but not extremity ES, and for the 16-24 age group but not 0-15. 2013-2015 chemotherapy records were incomplete, but by 2022, 91% of patients had a record of chemotherapy within 12 months of diagnosis including 96% of 0-24-year-olds. In 2013, VDC/IE made up 19% of first-line chemotherapy delivered and VIDE 25%; by 2022 this was 88% and 0% respectively. The proportion receiving surgery (56% in 2013; 54% in 2022) and RT (63% in 2013; 60% in 2018) showed little change. However, of patients who received both surgery and RT, 25% received pre-operative RT in 2013 vs 75% in 2018. Conclusion This analysis provides contemporary incidence and survival for ES, information on management, and demonstrates significant improvement in outcome. Detailed analysis of management to follow.

Day Two: 12.20 - 12.30

Clinico-pathological risk score after neoadjuvant imatinib predicts relapse-free survival in GIST patients

Javier Pozas, The Royal Marsden Hospital; Andrea Napolitano, The Royal Marsden Hospital; Daniel Lindsay, The Royal Marsden Hospital; Myles Smith, Charlotte Benson, Robin L Jones

Background: Surgery remains the cornerstone of localized GIST management. Neoadjuvant (NA) imatinib facilitates surgery and allows in vivo monitoring of tumour response. There are no predictive tools to guide the duration of treatment. This study evaluates the impact of clinico-pathological variables on relapse-free survival (RFS) after neoadjuvant imatinib. Methods: Single-centre retrospective study of 98 GIST patients who underwent radical surgery after NA imatinib. The residual mitotic count (RMC) was determined per 5 mm2 in the surgical specimen. Evaluate Cutpoints were used to identify values associated with significantly different outcomes. Results: Univariate regression analyses showed a significant association of RFS with initial tumour size (ITS) (HR 1.11, p = 0.001), change in tumour size (CTS) (HR 12.4, p = 0.021) and RMC (HR 1.09, p << 0.001). These results were confirmed in a multivariate model (ITS, p = 0.001; CTS, p = 0.003; RMC, p << 0.001). Cut-points for ITS, CTS and RMC were established at 97 mm, 44% reduction in size and 2 mitosis, respectively. Patients with large tumours ? 97 mm, ? 44% reduction in size and ? 2 mitoses had shorter RFS. A combined score of these three variables allowed for accurate classification into two risk categories (p << 0.001): favourable (0 or 1 factor) and poor risk (2 or 3 factors). Conclusions: ITS, CTS and RMC are associated with shorter RFS in patients with localized GIST treated with NA imatinib. If validated, these findings could guide the design of prospective studies that de-escalate or intensify adjuvant treatment

Day Two 12.30 - 12.40

Updated overall survival and safety with ripretinib vs sunitinib in patients with advanced gastrointestinal stromal tumor previously treated with imatinib and harboring KIT exon 11 + 17/18 mutations: ctDNA analysis from INTRIGUE

Robin L. Jones, Sarcoma Unit, The Royal Marsden NHS Foundation Trust and Institute of Cancer Research, London, UK; Erika Davis, Deciphera Pharmaceuticals LLC, Waltham, MA, USA; Kam Sprott, Deciphera Pharmaceuticals LLC, Waltham, MA, USA; Matthew L. Sherman, Deciphera Pharmaceuticals LLC, Waltham, MA, USA Michael C. Heinrich, Portland VA Health Care System, Portland, OR, USA and OHSU Knight Cancer Institute, Portland, OR, USA Sebastian Bauer, Department of Medical Oncology, Sarcoma Center, West German Cancer Center, University Hospital Essen, University Duisburg-Essen, Essen, Germany and German Cancer Consortium (DKTK), Partner Site University Hospital Essen, Essen, Germany

INTRODUCTION: Ripretinib is approved for patients with gastrointestinal stromal tumor (GIST) who received prior treatment with 3 or more kinase inhibitors, including imatinib. Sunitinib is approved for advanced GIST after imatinib failure. In an exploratory analysis of baseline circulating tumor DNA (ctDNA) from the INTRIGUE phase 3 trial, patients with KIT exon 11 primary mutations and secondary

mutations exclusively in KIT exons 17/18 (KIT exon 11+17/18) received benefit from ripretinib but not sunitinib. We present the final overall survival (OS) analysis and updated safety in these patients. METHODS: In INTRIGUE (NCT03673501), adults with advanced GIST who had disease progression on or intolerance to imatinib were randomized 1:1 to ripretinib 150 mg once daily (QD) or sunitinib 50 mg QD (4 weeks on/2 weeks off). Baseline peripheral whole blood was analyzed by Guardant360, a 74-gene ctDNA next-generation sequencing–based assay. Data cutoff: March 15, 2023. RESULTS: Of 453 patients, ctDNA was analyzed for 362; 52 harbored mutations exclusively in KIT exon 11+17/18 (ripretinib, n=27; sunitinib, n=25) and had better OS with ripretinib vs sunitinib (median, not reached vs 17.5 months; nominal P=0.0091). Fewer patients had grade 3/4 drug-related treatment-emergent and serious adverse events with ripretinib vs sunitinib (33% vs 50% and 3.7% vs 13%, respectively). Median treatment duration was 15.6 and 3.0 months for ripretinib and sunitinib, respectively. CONCLUSIONS: In this update, OS was longer for ripretinib vs sunitinib for patients with KIT exon 11+17/18 mutations (per baseline ctDNA). Safety was consistent and favorable for ripretinib. Previously presented at ESMO-SRC 2024.

Day Two: 12.40 - 12.50

Heterogeneity of Platelet-Derived Growth Factor Receptor Alpha (PDGFRA) Non-D842V (Aspartate/Valine Substitution) Mutant Gastrointestinal Stromal Tumours (GISTs): Cambridge Experience.

Ramesh Bulusu, Cambridge University Hospital; Chioma Iwu, Cambridge University Teaching Hospital; , ; Helen Hatcher Cambridge University Hospital Jennifer Harrington Cambridge University Hospital Han Hsi Wong Cambridge University Hospital

Introduction: PDGFRA-mutated GISTs comprise 10-15% of GISTs. The most common variant is exon 18 codon D842V, believed to be imatinib resistant. Other mutations are rare We present our experience with PDGFRA non-D842V mutant GISTs. Methods: Data was extracted from the Cambridge GIST database from 2008-2024. Patient demographics, tumour size, location, histology, immunophenotyping, mutational status and treatment outcomes were analysed. Results: We had 62 PDGFRA patients of which 25 (40%) were non-D842V N=25. Male=15, female=10. Median age 62 years (range 19-82). 24/25 were located in stomach, 1 extra-gastrointestinal GIST. Median tumour size 5 cm (range 1-26 cm). Histology: 10=epithelioid, 9=mixed and 6=spindle cell. All tumours were DOG-1+ve and 13/25 had only patchy CD117 positivity. Median mitotic index 2 mitoses/5mm2 (range 0-51). The most common mutation was exon 18 involving hotspot region codons 841-846 in 16 patients. Six patients had exon 12 and 3 had exon 14 mutations. Four patients were treated with imatinib 200-400 mg daily. Two patients (exon 18 codon 843 deletion and exon 18 Asp842Tyr) had neoadjuvant imatinib followed by resection. Final histology showed hyalinisation, necrosis, haemorrhage and infarction. Two patients (exon 14 codon N659Y, exon 18 codon 843-846 del) remain on imatinib with partial responses on imaging at 6 and 12 months. Conclusions: Our data illustrate the heterogeneity of PDGFRA non-D842V GISTs. The most common mutation is in exon 18 and may be imatinib sensitive based on our experience. This is a distinct subtype of PDGFRA GISTs compared with D842V-mutant GIST

Day Two 14.10 - 14.20

The Burden of Surgery for Tenosynovial Giant Cell Tumour: A Targeted Review

Brooke Harrow, Deciphera Pharmaceuticals, LLC, Waltham, MA, USA; Max Lee, Costello Medical, Boston, MA, USA; Emily Kaiser, Costello Medical, Boston, MA, USA; Nicholas Zeringo Deciphera Pharmaceuticals, LLC, Waltham, MA, USA

Introduction Tenosynovial giant cell tumour (TGCT) is a locally aggressive neoplasm usually treated by surgical resection. A targeted literature review was conducted to characterise the burden of TGCT, focusing on surgery-related burden. Methods Embase, MEDLINE, and select conferences were searched in August 2023. Eligible studies were in English, published 2013–2023, included ?20 patients with TGCT (?40 for humanistic burden studies), and reported epidemiology, humanistic burden, treatment patterns, or economic outcomes. For treatment patterns and economic outcomes, data from 2008 and later were included. For studies with multiple publications, those with non-identical populations were considered unique. Results Of 1,171 records screened, 48 publications reporting on 36 studies were included. Across 11 reporting studies, 9%–60% of patients received ?2 surgeries. Post-operative recurrence rates were up to 67%. Surgery-related resource use included repeat hospitalisations, imaging, specialist visits, and supplemental care. Joint replacements and amputations were performed more frequently for subsequent versus initial surgeries across all three reporting studies and were associated with longer recovery than arthroscopy in the one reporting study. Surgery-related hospitalisations comprised >70% of total healthcare costs in a European study. Among 19 studies reporting humanistic burden outcomes, patients frequently reported pain and stiffness, and TGCT negatively impacted health state utilities, quality of life, and physical function. These outcomes generally improved after surgery but were worse among patients who received ?2 surgeries. Conclusions The economic and humanistic burden of TGCT may be exacerbated by multiple surgeries. The risk/benefit profile of surgery should be considered alongside non-invasive treatment options. This abstract was accepted and previously presented at the ISPOR Europe 2024 conference; Barcelona, Spain. This research and medical writing support were funded by Deciphera Pharmaceuticals, LLC, Waltham, MA, USA.

Day Two: 14.20 - 14.30

Safety and efficacy with vimseltinib in patients with tenosynovial giant cell tumor who received no prior anti–colony-stimulating factor 1 therapy: ongoing phase 2 study

Mahbubl Ahmed, University College London Hospitals NHS Foundation Trust, London, UK; César Serrano, Vall d'Hebron Institute of Oncology, Barcelona, Spain; Jean-Yves Blay, Centre Léon Bérard, Lyon, France; Hans Gelderblom, Leiden University Medical Center, Leiden, Netherlands Silvia Stacchiotti, Fondazione IRCCS Instituto Nazionale dei Tumori, Milano, Italy William D. Tap, Memorial Sloan Kettering Cancer Center, New York, NY, USA

INTRODUCTION: Vimseltinib is an investigational, oral, switch-control tyrosine kinase inhibitor designed to selectively and potently inhibit the colony-stimulating factor 1 receptor (CSF1R). Vimseltinib showed statistically significant and clinically meaningful improvements in the primary and all key secondary endpoints vs placebo in the phase 3 MOTION trial. We report long-term safety and efficacy from cohort A in phase 2 (expansion; enrollment complete) of an ongoing phase 1/2 study (NCT03069469). METHODS: Patients with symptomatic tenosynovial giant cell tumor (TGCT) not amenable to surgery and no prior anti-CSF1/CSF1R therapy (previous imatinib or nilotinib allowed) received vimseltinib 30 mg twice weekly. Safety, tolerability, and antitumor activity were evaluated. Antitumor activity was assessed by independent radiological review using Response Evaluation Criteria in Solid Tumors version 1.1 (RECIST v1.1) and Tumor Volume Score (TVS). RESULTS: In cohort A, 46 patients were enrolled. As of March 1, 2024, most treatment-emergent adverse events (TEAEs) were grade 1/2. Grade 3/4 TEAEs (>5% of patients) were increased creatine phosphokinase and hypertension. There was no evidence of cholestatic hepatotoxicity or drug-induced liver injury. Median treatment duration was 22.2 months (range, 0.2–36.6), and 41% of patients remained on treatment at data cutoff. Best overall response was 64% per RECIST

v1.1 and 62% per TVS. CONCLUSIONS: As shown in this study, vimseltinib is well tolerated and demonstrates robust antitumor activity in patients with TGCT. These results support long-term safety and efficacy of vimseltinib in patients with TGCT not amenable to surgery with no prior anti-CSF1/CSF1R therapy. Previously presented at ESMO 2024.

Day Two 14.30 - 14.40

Updated efficacy and safety of vimseltinib in patients (pts) with tenosynovial giant cell tumor (TGCT): 1-year follow-up from the MOTION phase 3 trial

Sarah Pratap, Churchill Hospital, Oxford University Hospitals NHS Foundation Trust, Oxford, UK; Hans Gelderblom, Leiden University Medical Center, Leiden, Netherlands; Vivek Bhadri, Chris O'Brien Lifehouse, Camperdown, Australia; Silvia Stacchiotti, Fondazione IRCCS Istituto Nazionale dei Tumori, Milano, Italy; Jean-Yves Blay, Centre Léon Bérard, Lyon, France; William D. Tap, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Introduction: Vimseltinib is an investigational, oral, switch-control tyrosine kinase inhibitor designed to selectively and potently inhibit colony-stimulating factor 1 receptor. In the MOTION phase 3 trial (NCT05059262) part 1, vimseltinib showed statistically significant and clinically meaningful improvements vs placebo in the primary and all 6 key secondary endpoints in pts with TGCT not amenable to surgery. We report 1-year follow-up after last randomization, including ongoing part 2 results. Methods: MOTION is composed of double-blind (part 1), open-label (part 2), and extension periods. Pts receiving placebo in part 1 could receive vimseltinib in part 2 (crossover). Endpoints included objective response rate (ORR) and duration of response (DOR) by independent radiological review per Response Evaluation Criteria in Solid Tumors version 1.1 (RECIST) and Tumor Volume Score (TVS), as well as safety. Data cutoff: Feb 22, 2024. Results: At week 25 (end of part 1), ORR per RECIST and TVS in pts randomized to vimseltinib was 40% and 67%, respectively; among those responders, median DOR per RECIST and TVS in part 2 was still not reached. A total of 118 pts received vimseltinib in part 2 (67% ongoing). Median treatment duration was 14.4 and 8.2 months for randomized vimseltinib and crossover groups, respectively. Safety was consistent with previous reports with no evidence of cholestatic hepatotoxicity or drug-induced liver injury. Conclusions: In this report of long-term results (?1 year) from MOTION, vimseltinib remained well tolerated and provided long-term antitumor responses in pts with symptomatic TGCT not amenable to surgery. Previously presented at ESMO 2024.

Abstracts - **Posters**

1. Exploring the relationship between ethnicity, and adherence to follow-up guidelines at Royal National Orthopaedic Hospital (RNOH) Sarcoma Service

Abigail McCarthy, Royal National Orthopaedic Hospital Stanmore; Devan Hawes, Brunel University London; Dr Dana Maki, Brunel University London; Dr Roxy Tehrany, RNOH Stanmore

Background - People from ethnic minority backgrounds historically experience poorer health outcomes attributed to various interconnected factors, including health literacy and language barriers. This study aimed to explore whether a relationship was observed between ethnicity, levels of deprivation and adherence to follow-up guidelines amongst patients referred to the RNOH Sarcoma Service Methods - A service evaluation was carried out using anonymised data that was retrospectively collected from the RNOH hospital electronic notes system between January 1st 2022 and December 31st 2023. Descriptive statistics were used to characterise patients, as well as appointment attendance, and index of deprivation based on postcodes. Patients were categorised into Caucasian and non-Caucasian group. Welch's t-tests were used due to unequal variance identified in the data. Results - Data from 205 patients with a mean age of 56.4 (±19.6SD) were eligible for inclusion, including 124 males. Most patients identified as Caucasian (n=161), while 44 patients assigned themselves to an alternative ethnicity code. Non-Caucasian patients exhibited significantly higher rates of missed appointments (χ^2 = 8.65, p=0.034), and resided in higher areas of deprivation (p=<0.001), compared to Caucasian patients. Conclusion - These preliminary findings suggest that non-Caucasian patients attending the RNOH Sarcoma Service might experience a less standardised pathway compared to Caucasian patients. Future, prospective research with a larger samples are needed to determine causality, in addition to qualitative research exploring the factors underpinning these differences through interviews with patients and clinicians, to identify strategies to optimise the pathway.

2. Three years embedding Treatment Review and Holistic Needs Assessment - What Have we Learned about Outcomes?

Abigail McCarthy, Royal National Orthopaedic Hospital Stanmore; Kate Scanlan, Royal National Orthopaedic Hospital Stanmore; Joanne Coleman, Royal National Orthopaedic Hospital Stanmore; Suzy Hudson Royal National Orthopaedic Hospital

Background Advanced Care Practitioner's can transform pathways of care, enabling safe and effective sharing of skills across traditional professional boundaries. The Sarcoma Service at Royal National Orthopaedic Hospital have embedded personalised follow up utilising nursing, Occupational Therapy and Physiotherapy to optimise post-surgical follow up while embedding holistic needs assessment (HNA) and treatment review. HNA results are guiding the development of our service, providing tailored support for empowering individuals to help manage long-term disabilities cause by sarcoma treatment and promoting independence in daily life. Methods Service evaluation enabled retrospective analysis of data collected from RNOH follow-up appointments between January 1st 2022 and October 31st 2024. Demographics and the outcomes of HNA's were noted. Results Total Treatment summaries 425 Total HNA's 420 176 female 244 male 310 Soft Tissue Sarcoma 110 Bone Sarcoma Age: 18 - 30 = 57 31-50 = 98 51 - 70 = 134 71+ = 131 Top 10 concerns across 3 years Moving around (walking) 149 Tired, exhausted or fatigued 141 I have questions about my diagnosis, treatments or effects 102 Pain or discomfort 99 Thinking about the future 95 Exercise and activity 85 Worry, fear or anxiety 84 Money or finance 81 Work or education 76 Sadness or depression

73 Conclusion HNA have enabled us to identify and address the needs of those treated within the service. Findings have supported the development of business cases to appropriately expand the team. We are now starting to evaluate how we address psychological and financial needs of patients.

3. OxPOS operational delivery experiences in a real-world prospective observational and sample collection study in high-grade sarcoma.

Adam Bekulart, Oxford University Hospitals NHS Foundation Trust; Giuseppe Cuccurollo, Oxford University Hospitals NHS Foundation Trust; Sofia Alves-Vasconcelos, UNIVERSITY OF OXFORD; Andrew B Hassan University of Oxford Senior Author Harriet Branford-White Oxford University Hospitals NHS Foundation Trust

Real world observational studies reveal unique insights into the cancer pathway and have important impacts for research implementation. When combined with sample collection for downstream biomarker and genomic analysis, these research results are immediately placed into the clinical pathway context. Efficient delivery of such studies requires more specific partnerships embedded with standard of care services. Here, we report our experience of delivery of the Oxford Precision Oncology for Sarcoma study of high-grade sarcoma. Recruitment of participants was co-ordinated directly from the Oxford Sarcoma standard of care MDT by frontline treating clinicians. Over 100 patients have been recruited so far to enter the study and to make available their electronic patient record data, imaging and material collected as part of their standard of care. Close integration with the standard of care recruitment pathway and the research network research practitioners facilitated seamless collection of blood samples, consents, questionnaires and sarcoma samples, with recruitment and study governance run parallel. Flexibility enhances contemporaneous answering of queries, governance and data practices. Changes to communication strategies with participants and families align with the objectives of the protocol, offering a more rewarding experience for research practitioners as more integrated members of the sarcoma team. The experience of delivery of real world prospective observational study such as OxPOS is the realisation of a more closely integrated research practice within sarcoma care.

4. Empowering Change: The Role of Advocates in Improving Outcomes for Advanced Sarcoma Patients in Rural India

Aditya Manna, MAS Clinic & Hospital; Saptaparna Jana, Narikeldaha Prayas

Introduction: Sarcoma, a rare and aggressive form of cancer, poses significant challenges in rural India due to limited access to healthcare resources and a lack of awareness. Advocates play a crucial role in bridging the gap between patients and healthcare services, improving outcomes for those affected by advanced sarcoma. Method: This study employed a mixed-methods approach, combining quantitative data from patient surveys and healthcare providers with qualitative interviews of advocates working in rural regions. The advocacy efforts were assessed based on their impact on awareness, access to treatment, and support services for sarcoma patients. Results: The findings highlighted that advocates significantly increased awareness of sarcoma, leading to earlier diagnosis and treatment initiation. Approximately 70% of patients reported improved access to healthcare services due to advocacy initiatives, including educational workshops and community outreach programs. Furthermore, advocates facilitated connections between patients and healthcare providers, resulting in enhanced emotional and logistical support for patients and their families. Conclusion: The role of advocates in managing advanced sarcoma in rural India is pivotal. Their efforts not only raise awareness but also improve access to necessary treatments and support systems, ultimately leading to better patient outcomes. Strengthening advocacy initiatives could further enhance the healthcare landscape for sarcoma patients, emphasizing the need for collaborative efforts between healthcare providers, patients, and advocates to improve cancer care in rural settings. Future research should focus on developing sustainable advocacy models to ensure continued support for this vulnerable population.

5. OxPOS evaluation of germline and somatic VUS in high-grade sarcoma using AlphaMissense.

Andrew B Hassan, UNIVERSITY OF OXFORD; Stuart Brown, UNIVERSITY OF OXFORD; Rachael Wilkinson, UNIVERSITY OF OXFORD; Richard Wallbank University of Oxford

Compared to other cancers, there are fewer missense and actionable targets for sarcoma. Missense variants are scored as pathogenic by ClinVar/ ACMG (scores >99%/ >90%). Scores that range from these cut-points to 10% (benign) are referred to as variants of unknown significance (VUS). Here, we asked whether new Nobel prize winning AI based structural analysis could improve the classification of VUSs specifically detected in sarcoma. Alphafold2, a deep neural network algorithm for protein structure, has informed the development of a new tool, AlphaMissense (AM). The functional impact of every single missense variant in the human genome is used to generate a continuous pathogenicity score (0 benign-1.0 pathogenic). VUSs were identified from the Oxford Sarcoma Precision Oncology cohort using FoundationOne□Heme Sarcoma (FMI) for tumour samples and germline variant panel from whole exome sequencing (WES). AM reclassified >1000 VUSs from 60 high grade sarcoma into benign or pathogenic, with only ~1% remaining as ambiguous. Variants reclassified as pathogenic were assessed based on the variant, the evolutionary consensus of the residue, structural analysis and enrichment of the variant within sarcoma patients compared to known frequencies across the population. We are extending this analysis to >10,000 sarcoma VUS profiles obtained from FMI. The AM classifier dichotomises VUS to either benign or pathogenic, but this is not based on functional predictions directly. AM should not be used in the analysis of clinical samples but could stratify potential pathogenic variants for functional investigation.

6. OxPOS interim outcomes from a prospective germline exome sequencing panel in real-world high-grade sarcoma.

Andrew B Hassan, UNIVERSITY OF OXFORD; Richard Wallbank, UNIVERSITY OF OXFORD; Lara Hawkes, Oxford University Hospitals NHS Foundation Trust; Sofia Alves-Vasconcelos, University of Oxford Harriet Brandford-White, Oxford University Hospitals NHS Foundation Trust Adam Bekulart, Oxford University Hospitals NHS Foundation Trust

The identification of pathogenic gene variants and genetic predisposition to cancer is estimated to occur in 1-5% of cases and their families. For childhood cancer (8-10%) and sarcoma (5-10%) the frequency has been observed to be higher, especially in those cases specifically associated with family histories. What is less well understood is the frequency of detected gene variants in the germline of sarcoma patients independent of their family history. Here, we have prospectively performed whole exome sequencing and GATK variant discovery pipeline analysis in a single centre real world cohort of adult patients (>18) diagnosed with high-grade sarcoma (Oxford Precision Oncology for Sarcoma, OxPOS). We identified 97 genes that comprised an extended panel previously associated with cancer and sarcoma germline variants and reported the frequency of variants. So far approximately one quarter of the OxPOS patients have been recruited with 15% of cases (9/58) having a heterozygote pathogenic variant requiring clinical genetics consultation, family history and confirmatory studies. Similar findings have been reported in childhood cancer cohorts where the germline variant frequency may be slightly higher (10-15%). Examples of germline variants include new diagnosis of Li-Fraumeni syndrome (Tp53), PTPN11, CDKN2A, CHEK2(2), FANCC, SDHA, FH and BLM. Reporting of the completed cohort may complement other real-world prospective use of germline testing on all-comers, independent of age, and potentially provide

insights into the mechanisms of sporadic and genetic-based sarcoma development.

7. State of the Nation: Initial Results from a Review of Sarcoma Services

Andrew French, Sarcoma UK; Richard Davidson, Sarcoma UK; Eleanor Carpenter, Sarcoma UK; Andrew Little, True North; Eilidh Whiteford, True North; Sorrel Bickley, Sarcoma UK

Introduction Sarcoma UK has been gathering views on NHS sarcoma care across the UK, to help us to better understand how well the NHS is doing in terms of sarcoma care and what needs to improve. The review will help to identify gaps in current services and push for improvements in sarcoma care. Methods In November and December 2024 we sought evidence from healthcare professionals across primary, secondary care and specialist sarcoma care, alongside ministers and government departments, National and local NHS organisations, researchers and other charities. We also invited submissions from people affected by sarcoma across the UK. Results and Conclusions As of 6th December over 300 responses have been received to this call for evidence. These submissions will be collated and analysed on a thematic basis which will be completed by February 2025. This analysis will highlight key themes and emerging issues across sarcoma care in the four nations of the UK. We also hope to uncover and present specific aspects of best practise, challenges and inequalities.

8. OxPOS pathway optimisation modelling for advanced sarcoma precision care: A scoping review

Apostolos Tsiachristas, UNIVERSITY OF OXFORD; Zython Lachica, UNIVERSITY OF OXFORD; Teodoro, D'Agostino; Andrew B Hassan University of Oxford

Pathway optimisation is crucial for guiding the efficient use of healthcare resources. This is particularly relevant for sarcoma, a rare type of cancer that comprises of ~80 subtypes that arise in different tissues and that requires bespoke multi-disciplinary care. Here, we aim to identify pathway optimisation modelling approaches suitable to evaluate operational efficiency in advanced sarcoma care including the OxPOS cohort. Comprehensive searches were conducted in PubMed, Embase, Scopus, Web of Science, and ProQuest, targeting studies on sarcoma or rare cancers that intersect with either health service delivery or modelling techniques. These techniques encompass dynamical systems, agent-based modelling, linear programming, Markov models, and mathematical oncology approaches. Of the 56 articles initially screened, 12 met the criteria for in-depth analysis as well as removing the duplicates, reflecting the specialised nature of this research domain. Discrete event simulations, decision analytic models, survival models, and Markov models are widely used to evaluate the cost-effectiveness of individual treatments, such as comparing drugs or diagnostic methods. Furthermore, traditional health economic approaches often fall short in adequately assessing the cost-effectiveness of emerging precision technologies, as they typically focus on factors like sensitivity, specificity, and biomarker testing costs, without capturing the broader complexities involved (i.e., health outcomes). Most studies primarily assess the cost-effectiveness of individual interventions, leaving the comprehensive evaluation of the entire treatment process as an area for further research (i.e., modelling complex interventions). For sarcoma care, addressing this requires a systems-based understanding, particularly given the prevailing focus on phenomenological modeling.

9. Applicability of Sarculator nomogram to prognose and stratify resected extremity soft tissue sarcoma patients in a UK cohort

Athul Dinesh, UCL Medical School, University College London; Mahbubl Ahmed, University College London Hospitals NHS Foundation Trust

Introduction: Extremity soft tissue sarcoma (ESTS) patients require follow-up after primary treatment due to risk of distant metastasis.

Sarculator is a prognostic nomogram developed to predict 5-year overall survival (5y-OS) and distant metastasis (5y-DM) risk in ESTS patients. However, studies externally validating Sarculator's accuracy in recent UK cohorts are lacking. Our study aimed to validate Sarculator's discrimination and calibration in a UK cohort of patients, to determine if it can be used for effective risk stratification to optimise follow-up. Methods: In this retrospective cohort study, ESTS patients treated with surgery and curative radiotherapy at a tertiary sarcoma centre in 2017-18 were included. Predicted 5y-OS and 5y-DM were calculated using Sarculator. Actual 5y-OS and 5y-DM risk was estimated using the Kaplan-Meier method. Predicted 5y-OS and 5y-DM probabilities were stratified into subgroups and compared to actual probabilities in calibration plots. The discrimination of Sarculator for 5y-OS and 5y-DM was assessed using Harrell's c-index. Results: 109 patients were analysed with a mean follow-up of 54.9 months. 68.8% of patients survived and 30.3% developed metastasis. Harrell's c-index for 5y-OS prediction was 0.698 and for 5y-DM was 0.631. Calibration plots showed better calibration for lower-risk 5y-OS and 5y-DM subgroups, but poorer calibration in higher-risk subgroups. Conclusions: Sarculator can more reliably be used to predict prognosis in lower-risk patient subgroups. However, its predictive accuracy in higher-risk subgroups remains uncertain. We propose its application to identify lower-risk subgroups, whose follow-up can be optimised. Further investigation is warranted to investigate Sarculator's calibration in higher-risk subgroups in UK populations.

10. The Role of C-Reactive Protein in Predicting Postoperative Complications in Retroperitoneal Liposarcoma Resections

Aymerito F, Sarcoma Unit, Department of Surgery, Royal Marsden Hospital, London, UK.; Lukamba P, Physician Assistant, Sarcoma Unit, Department of Surgery, Royal Marsden Hospital, London, UK.; Strauss DC, Sarcoma Unit, Department of Surgery, Royal Marsden Hospital, London, UK.; 4. Hayes AJ, Sarcoma Unit, Department of Surgery, Royal Marsden Hospital, London, UK. 5. Smith MJF, Sarcoma Unit, Department of Surgery, Royal Marsden Hospital, London, UK. 6. Wilkinson MJ, Sarcoma Unit, Department of Surgery, Royal Marsden Hospital

Background C-reactive protein (CRP), a well-established inflammatory marker, is widely used alongside clinical assessments to identify postoperative complications (POCs). This study evaluates the predictive value of CRP levels in detecting severe POCs following retroperitoneal liposarcoma resections. Methods This cohort study analysed a prospectively maintained database of patients who underwent primary retroperitoneal liposarcoma resection at a sarcoma centre between 2017 and 2022. POCs, defined as Clavien-Dindo grade ≥3, were recorded. Statistical analyses, including t-tests and ROC, were performed using GraphPad Prism V10. Results Among 185 patients (median age 66 years), 95 had right-sided, 83 left-sided, and 7 pelvic liposarcomas resections. The median hospital stay was 10 days. POCs occurred in 39 patients (21%), including anastomotic leaks (5%), pancreatic leaks (4%), and abdominal collections (8%). CRP levels were significantly higher from Days 2 to 7 in patients with POCs ($p < 0.001$). The peak CRP level on Day 3 in patients without POCs was 181 mg/L (95% CI 166–196) and with complications was 264 mg/L (95% CI 233–294) which remained statistically elevated through to Day 7 ($p < 0.001$). A CRP value greater than 210 mg/L on Day 3 was observed in 66% of patients with complications, yielding a sensitivity of 70%, specificity of 70%, and a positive predictive value of 39% for detecting POCs. Conclusions A CRP level >210 mg/L on Day 3 post-surgery raises suspicion of POCs in retroperitoneal sarcoma resections. Persistently high CRP values warrant closer clinical surveillance for early complication detection and intervention.

11. Sarcoma UK Support Group Leaders Network Day and Development of the Sarcoma Support Groups

Carly McDonald, Sarcoma UK; Ellis Lill, Sarcoma UK

Introduction There are several sarcoma support groups within the UK, some facilitated face-to-face, some virtually and others offering a hybrid approach. Many of these groups are led by individuals affected by sarcoma, and some by Clinical Nurse Specialists or Support Workers. These groups provide people with the opportunity to meet others who have been affected by sarcoma, to help ease the isolation felt by these individuals. The support group leaders (SGLs) will often signpost members to other support services, including the Sarcoma UK support line (SL). Sarcoma UK provide support to SGLs, whilst also promoting the groups via the website, social media and SL. For the past 6 years, Sarcoma UK have hosted a network day for leaders and representatives from the groups. With new groups being launched, Sarcoma UK are continually looking at ways to further develop the groups. Method The aim of this network day is to bring the leaders together to discuss highlights, challenges and share ideas for future development. In 2024, the day included updates from Sarcoma UK, a talk from Sarcoma UK's Founder about his work with the Sarcoma Patient Advocacy Global Network, in addition to time spent in small groups, getting to know one another. The Sarcoma UK team were also able to gather feedback for the future development of the groups, including the formation of an induction package for new leaders and training opportunities. Results The feedback received from those in attendance has always been overwhelmingly positive, the most valuable part being meeting others, sharing experiences and ideas and gaining support to set up and grow a support group. Attendees also appreciate the Sarcoma UK updates and are keen to hear more about the work of the charity. Conclusion Sarcoma UK will continue to work with the support groups to ensure those affected by sarcoma have access to peer support throughout their experience.

12. The use of Sarcoma UK's Direct Referrals Service by the Swansea Sarcoma Nurse Team

Carly McDonald, Sarcoma UK; Helen Stradling, Sarcoma UK; Johanne Vass, Swansea Bay University Health Board; Lucy Whiddett - Swansea Bay University Health Board Hannah Morgan - Swansea Bay University Health Board Luke Davies - Swansea Bay University Health Board

Introduction The Swansea Sarcoma Nurse Team and Sarcoma UK Support Line (SL) Team piloted a Direct Referrals Service from October 2020 - February 2021. This service involves the team referring every patient, with their verbal consent, directly to the Sarcoma UK SL, ideally at the point of diagnosis. Following a successful pilot, the Swansea team have now referred more than 227 individuals for additional information, support and signposting to be offered. Method The Swansea team offer this as an opt-out service to every patient with a new diagnosis. The team send an email to the SL email address with just a name and telephone number. After one week, the SL team facilitate an initial call to each individual and often schedule follow-up calls. Results Feedback from the Swansea team and from individuals contacted has been positive. The SL team find having no clinical details allows them to fully grasp what the person affected by sarcoma has understood from the information received about their diagnosis and plan of care. The team have had 938 contacts with 227 people referred by the Swansea team. Conclusion The Sarcoma UK SL team are available to support anybody affected by sarcoma and are keen for the direct referrals service to be used effectively and rolled out more widely.

13. Pilot of Virtual Health and Wellbeing Information and Support (HWBIS) Programme with Sarcoma Patient Cohort

Carly McDonald/Helen Stradling, Sarcoma UK; Suzy Hudson/Abigail McCarthy/Kate Scalan/ Ruwayda Yusuf, Royal National Orthopaedic Hospital; Johanne Vass/Lucy Whiddett, Swansea Bay University Health Board; Debra Dunne/Nerys Davies - Royal Orthopaedic Hospital Josie Pawson - Leeds Teaching Hospitals

Introduction The Sarcoma UK support line team were approached by the Royal National Orthopaedic Hospital to discuss developing and piloting an online HWBIS. The overall aim was to rollout the programme nationally to provide advice and support to empower people with sarcoma following treatment. Given the widespread geographical layout of specialist sarcoma centres, the HWBIS programme was delivered virtually. Method Initial meetings identified the need for involvement from other sarcoma centres in the pilot. Representatives from the Royal Orthopaedic Hospital (Birmingham), Leeds Teaching Hospitals and Swansea sarcoma teams agreed to join the pilot. The Sarcoma UK Patient Involvement Network (PIN) were consulted for topic ideas to be covered during the programme. Speakers were identified for the following topics: Healthy Eating, Exercise, Fatigue, Financial Support and Managing Anxiety. The pilot consisted of five sessions, each of which was delivered twice via Microsoft Teams. An online registration form was created, in addition to flyers for distribution by the sarcoma teams involved in the pilot. Results Feedback gathered from attendees was very positive. All attendees reported the sessions were extremely useful. However, number of attendees at the sessions was low, ranging between 1-4. The project team met to discuss next steps and how to better promote the sessions and increase uptake. Feedback was sought from Sarcoma UK's PIN and patients at the centres, to help us understand any barriers to attending. Conclusion Plan to launch national pilot in Spring 2025 with involvement of all UK sarcoma centres.

14. A single centre experience of microvascular soft tissue transfer for reconstruction of the foot following sarcoma excision

Christie Brennan, North Bristol NHS Trust; Kristine Joyce Cadiz, Giulia Colavitti, Thomas Wright, Rachel Clancy

Following sarcoma resection, the foot's unique anatomy presents reconstructive challenges due to lack of local or robust, sensate soft tissue options that withstand adjuvant radiotherapy, preserve mobility and permit return to normal footwear. This study examines one unit's microsurgical foot reconstructions and corresponding outcomes. Single centre, retrospective cohort study of consecutive patients undergoing sarcoma excision and microvascular, free soft tissue reconstruction of the foot. Six free flaps were performed in five male patients between 2019-2024. Histological diagnoses of four patients, median age 71 (Range 40-86) included leimyosarcoma, pleomorphic rhabdomyosarcoma, clear cell sarcoma and epitheloid angiosarcoma. One paediatric patient (15 years old) had cutaneous Ewing sarcoma. Mean maximum tumour diameter was 22mm but mean defect size was 390cm2. One post-operative margin was narrow (0.2mm), otherwise mean closest margin was 6.7mm. Four patients received pre-operative radiotherapy, one stopped early due to soft tissue breakdown. Reconstruction included one groin flap, one gracilis, one radial forearm and two lateral arm flaps. There was one total flap loss. One lateral arm required leeching from day 2 post operative. All patients with minimum 3 months follow up were fully weight bearing without aids. Despite microsurgical advances, foot reconstruction that achieves robust, sensate cover and thus return to ambulation remains challenging. In our experience fasciocutaneous flaps are an excellent choice for reconstruction, particularly the lateral arm flap with it's potential for neurotisation and minimal donor site morbidity. Options should be assessed on a case-by-case basis with involvement of the patient to establish their priorities and expectations.

15. Histologic & Prognostic Comparison Between Atypical Fibroxanthoma & Pleomorphic Dermal Sarcoma

Christopher Archer, School of Medicine, Dentistry and Biomedical Science, Queen's University Belfast; Sandra McAllister, Queen's University Belfast, Faculty of Medicine, Health & Life Sciences; Eva M Sweeney, School of Medicine, Dentistry and Biomedical Science, Queen's University Belfast; Dr Oisín Houghton

- Affiliation: Institute of Pathology, BHSCT, Dr James Trainor - Affiliation: Institute of Pathology, BHSCT

Atypical fibroxanthoma (AFX) is a rare, relatively benign, cutaneous soft tissue tumour, clinically and morphologically resembling pleomorphic dermal sarcoma (PDS), a more malignant neoplasm. Due to their resemblance, differentiating between the two can be a diagnostic challenge, however certain histologic features are only present in PDS tumours, namely subcutaneous invasion, vascular/perineural infiltration, and tumour necrosis. To further establish these differences, and identify others, we performed a regional search for AFX and PDS cases diagnosed within N.I between 2021-2022. Following histologic review and reclassification, 21 AFX and 34 PDS patients were included in our study. All AFX cases were restricted to the dermis and displayed none of the aforementioned malignant features, whereas 76% of PDS cases invaded beyond the dermis, 59% demonstrated perineural infiltration, 32% displayed tumour necrosis and 24% showed vascular invasion. Other significant differences between the two included gross horizontal size ($W = 172.5$, $p = 0.015$) and tumour thickness ($W = 197.5$, $p = 0.002$). To evaluate the prognosis of these tumours, follow-up clinical data was reviewed up to 35 months post-excision. No AFX cases were found to recur in this period whereas 5 PDS tumours recurred within 8-14 months. No cases of metastatic disease were reported. Multivariate analysis was performed using Firth's logistic regression to determine the prognostic value of various histologic features; this produced no significant findings. Overall, our study supports the current diagnostic criteria for AFX and PDS and suggests gross horizontal dimension and tumour thickness may aid in distinguishing between the two tumour types.

16. Evaluating Access and Benefits of Free of Charge (FOC) schemes for Sarcoma Patients at a Tertiary Care Centre

Clare Geoghegan, University College London Hospitals; Sandra J Strauss, University College London Hospitals; Konstantinos Efthymiadis, University College London Hospitals; Matthew Morrow, Georgina Wood, Rachael Windsor University College London Hospital, London, United Kingdom

Introduction Free-of-charge (FOC) schemes provide access to off-label or unlicensed medicines for patients with unmet medical needs. However, implementing these schemes involves regulatory, logistical, and ethical challenges, often complicating the process. This study aimed to evaluate the processes and timelines for accessing FOC schemes for sarcoma patients and assess associated patient outcomes. Methods This retrospective analysis reviewed sarcoma patients treated at a single centre between October 2019 and January 2024 who were considered for FOC medicines. Data was sourced from Trust Formulary Committee database and patient records. The primary outcome was duration in weeks. Results A total of 62 patients were included: 35 (57%) with bone sarcoma, 12 (19%) with soft tissue sarcoma, 11 (18%) with gastrointestinal stromal tumours, and 4 (7%) with desmoid fibromatosis. Median age at treatment initiation was 26 years (range, 13–73), with a median of three prior therapies (range, 0–7). Fourteen therapies from nine pharmaceutical companies were evaluated. Median pharmaceutical approval time was 14 days (range, 3–68), 52 (85%) patients received the treatment recommended. Reasons for not receiving treatment included formulary committee refusal, patient deterioration, or death. The most accessed drugs were cabozantinib, sorafenib, and regorafenib. Patients remained on therapy for a median of 13 weeks (range, 2–177). Mean overall survival was 14.6 months (range, 1.5–33.5). Conclusions FOC schemes provide life-prolonging treatments for heavily pre-treated patients, demonstrating real-world benefits in rare cancers like sarcoma. However, varied application processes pose barriers, particularly for rapidly deteriorating patients, underscoring the need for streamlined approaches.

17. A risk stratified approach to the management of doxorubicin related cardiotoxicity in patients with soft tissue sarcomas

Clare Gilson, Royal Marsden NHS Foundation Trust; Keren Broyde, Royal Marsden NHS Foundation Trust; Mohamed Aboulela, Royal Marsden NHS Foundation Trust; Alanna Wall, Charlotte Benson

Background: Doxorubicin related cardiotoxicity is a well-recognised dose-dependent effect, necessitating on-treatment monitoring, typically with frequent echocardiograms. Recent European Society of cardiology cardio-oncology guidance recommends pre-treatment assessment of cardiovascular (CV) risk and adopting a risk-stratified approach to monitoring, incorporating troponin and BNP in addition to echocardiograms, with investigation frequency determined by risk.1 We describe a service improvement project aiming to incorporate this best practice approach. Methods: We audited practice and devised three interventions aiming to improve adherence to guidance including a guideline summary to educate healthcare professionals involved in the prescribing and administration of anthracyclines, a new risk-stratification tool within our electronic patient record and improved information prompts within the electronic prescribing system, used both prior to initiation of treatment and prior to administration of each cycle. A further audit of practice is planned for early 2025 to support iterative improvements. Results: Between Sept 2023 and March 2024 65 adult patients were prescribed doxorubicin containing regimes for the treatment of sarcoma. Of these, 65% were low/moderate risk, 11% were high risk, documentation was incomplete/missing in 14%. Baseline echocardiogram was performed in 64/65 patient. On treatment echocardiogram were performed more frequently than recommended in low/moderate risk patients. Baseline BNP was a frequent reason for pre-treatment cardio-oncology referral. On-treatment asymptomatic troponin and/or BNP rise commonly prompted the initiation of cardio-protective medications. Conclusions: Baseline cardiovascular risk-stratification informs treatment decision making, facilitates early initiation of cardio-protective measures and enables risk-stratified monitoring improving both patient safety and resource efficiency.

18. Sarcoma Patients' Experiences of their Psychological Needs

Dr Christopher Meek, Nottingham University Hospitals NHS Trust

Introduction Sarcoma is a rare form of cancer affecting soft tissue and bone. Previous research has highlighted psychological challenges associated with this subset of cancer. The purpose of this paper is to draw together existing qualitative research into the psychological experiences of sarcoma patients, and to identify any sarcoma-specific psychological needs. Method A systematic review was conducted with the question: "What are the psychological experiences of sarcoma patients?". The protocol for the review was preregistered with PROSPERO (CRD42023439959). All studies included were qualitative, and thematic meta-synthesis (meta-ethnography) was used. Results Screening of four relevant databases identified 38 studies for inclusion, with 36 contributing to the synthesis, post-quality assessment. Psychological experiences were split into two categories: Early Days (highlighting delays, shock, and immediate interpretations) and Living With and Beyond (encompassing relationships, anxieties and fears, sadness and loss, coping and growth). Discussion Many psychological impacts on general cancer populations are also applicable to sarcoma, such as fear of recurrence and progression of the disease. However, some have increased resonance in those with sarcoma, due in part to its rarity, disabling potential and its occurrence at younger age. Cancer staff who work with sarcoma patients should be aware of the additional informational, relational, and emotional challenges faced by those with sarcoma. Further research in to early- and later (end of life)- stages, as well as non-Western perspectives, is less well understood.

19. Survival outcomes in Ewing sarcoma: Leeds, United Kingdom

Dr Nicola Hughes, University of Leeds; Dr Rob Turner, Leeds Cancer Centre; Dr Jane Hook, Leeds Cancer Centre; Professor Dan Stark, University of Leeds Dr Fei Sun, Leeds Cancer Centre

Background: Survival outcomes remain poor for patients with Ewing sarcoma with current 5-year rates estimated at 82% for localised and 39% for metastatic disease. Patient age, sex, site of primary disease and presence of metastatic disease at diagnosis are documented prognostic factors. We describe the survival outcomes of patients treated in our centre. Methods: Data were extracted from the electronic patient notes system at Leeds Teaching Hospitals NHS Trust for all patients with a diagnosis of Ewing sarcoma under our care from January 2014 to October 2024. Survival over time was described using Kaplan-Meier estimation. Cox regression models were used to determine the adjusted effect of prognostic characteristics on mortality risk. Results: Data for a total of 80 patients were analysed. 28 patients had died at the time of data extraction. Five-year survival for patients with metastatic disease was 37.5% compared to 63.1% in non-metastatic disease. Male sex (HR 2.25: 95%CI: 0.87-5.86), tumour size greater than 8cm (HR 4.32: 95%CI: 1.48-12.57), metastatic disease at diagnosis (HR 1.79: 95%CI: 0.75-4.29) and tumours located in the axial skeleton (HR 1.25: 95%CI: 0.32-4.8) were associated with the highest risk of death. A greater risk of death was seen in patients diagnosed aged 15-29 years (HR 1.11: 95%CI: 0.33-3.69) and over 29 years (HR 3.38: 95%CI: 1.16-9.87) compared to those under 15 years. Conclusion: Survival outcomes for patients with metastatic Ewing treated in our centre are comparable to published outcomes. Our findings support the existing literature regarding poor prognostic indicators in Ewing.

20. Are all chondrosarcomas secondary? An evaluation of prior imaging and prodromal symptoms in presumed primary lesions

Elspeth Murray, NHS Greater Glasgow and Clyde; Sanjay Gupta, NHS Greater Glasgow and Clyde; Julian Pietrzycki, NHS Greater Glasgow and Clyde; Ofir Ben-Gal, Sarah Vaughan, Ashish Mahendra (all NHS Greater Glasgow and Clyde)

Introduction Primary chondrosarcomas are defined as those which arise de novo, whereas secondary chondrosarcomas develop from precursor lesions (enchondromas or osteochondromas). Despite lacking literature, there is a consensus opinion amongst specialists in orthopaedic oncology that chondrosarcomas have precursor lesions and therefore are secondary in nature. Methods This thirteen-year retrospective cohort study primarily aims to ascertain whether patients with a diagnosis of primary chondrosarcoma have abnormal imaging that predates their diagnosis. Secondarily, we evaluated the duration and nature of any reported preceding symptoms. We broke down our results to look specifically at intermediate to high-grade chondrosarcomas in more depth. Results More than half of our study population had no prior imaging for comparison. Of those imaged, 71.4% (20.4% of cohort) had previous abnormal imaging at a site which went on to develop a presumed primary chondrosarcoma. All grade 2 and grade 3 diagnoses of chondrosarcoma which had prior imaging were on review, found to have evidence of precursor lesions. Almost all patients had a significant duration of preceding symptoms. Conclusion The idea that all chondrosarcomas have precursor lesions remains contentious. As over half our patients had no prior imaging, conclusions cannot confidently be applied to all presumed primary chondrosarcomas. Furthermore, of those with positive prior imaging, the suboptimal and non-dedicated modalities on which they have been identified creates significant diagnostic uncertainty as to their nature. We must however acknowledge that all our presumed primary intermediate to high-grade lesions with prior imaging, have demonstrated previous abnormalities.

21. The implications of rising primary care referrals of urgent suspected sarcoma to a tertiary referral centre

Emilia Sykes, University of Aberdeen; Sarah Thomson, University of Aberdeen; David Skipsey, Trauma and Orthopaedics Department, Aberdeen Royal Infirmary; Mariam Sattar. Trauma and Orthopaedics Department, Aberdeen Royal Infirmary. Tim Gardner. Trauma and Orthopaedics Department, Aberdeen Royal Infirmary. Megan Davies. University of Aberdeen, School of Medicine. Louise McCullough. Trauma and Orthopaedics Department, Aberdeen Royal Infirmary. David Boddie. Trauma and Orthopaedics Department, Aberdeen Royal Infirmary.

Prompt diagnosis and treatment can prevent the devastating limb and life-threatening consequences of sarcoma. This study investigates the effects of the increasing volume of primary care referrals to a tertiary sarcoma centre. The number of Urgent Suspected Cancer referrals to the Grampian Sarcoma service have significantly increased; 221 in 2019; 502 in 2020-2022 and 689 in 2022-24. The mean time from referral to imaging was 42 days in 2019 and 54 days in 2020-22. The mean time from referral to clinic review was 62 days in 2019 and 54 days in 2020-22. Additional clinics were created in response to rising referral numbers. This strategy however is unsustainable. Following clinic attendance, in 2019, 6% were diagnosed as normal anatomical variations or miscellaneous musculoskeletal conditions on history and examination alone. This increased to 26% in 2020-2022. The proportion of patients necessitating a CT or MRI decreased from 69% in 2019 to 47% in 2020-2022. The proportion of lesions biopsied was 12% in 2019 and 10% in 2020-2022. In the 2019, 2020-2021, 2021-2022 primary care referral cohorts, 7, 5, and 6 sarcomas were diagnosed respectively. The longest interval from referral to definitive surgery was 212 days in 2019 and 300 in 2020-2022. Referral rates continue to rise, yet sarcoma incidence has not. The proportion of referrals diagnosed as non-malignant on history and examination alone has increased more than four-fold. Evidently, reform in the referral pathway is crucial to reduce clinic waiting times for actual sarcoma referrals and facilitate their timely diagnosis and treatment.

22. The National Gastrointestinal Stromal Tumour (GIST) Tissue Bank

Eniola Ayeni, The Royal Marsden Hospital NHS Foundation Trust; Prof Robin L Jones, The Royal Marsden Hospital NHS Foundation Trust; Jayne Bressington, Cambridge University Hospitals NHS Foundation Trust; Prof Andrew Hall, RareCan Ltd

Introduction Opened in 2014 the National Gastrointestinal Stromal Tumour (GIST) Tissue Bank has been supporting and encouraging research into GISTs where limited tumour material is available for research. Over the last decade we have been able to facilitate several research projects and we aim to continue this work by promoting the biobank to all national and international researchers. Method This research is purely observational and involves the collection of peripheral blood, surgically resected tissue and formalin fixed paraffin embedded (FFPE) materials. Blood samples have been processed, stored and frozen as plasma, buffy coat and whole blood. Tissue is stored as fresh frozen tissue and FFPEs. Results Several institutions within the UK and the US have been successful at establishing cell lines from tissue they have received from the biobank. One institution in particular has been able to genetically engineer a mouse model of succinate dehydrogenase (SDH) deficient renal cell carcinoma. Very few verified cell lines exist for GISTs and cell lines without the common driver mutations such as SDH deficiency are even more uncommon. Conclusion The National GIST Biobank has been successful in recruiting patients and is currently focusing on the fresh tissue collection of subtypes that exclude the common KIT exon 11 mutations. We need more research proposals to the biobank for greater research advancements. Access to well-characterised cell lines is a key step in the development of new treatments as they can be used to improve understanding of the biology of the disease and for screening new drugs.

23. A Review of the Inpatient Sarcoma Chemotherapy Service in the North East: Suggestions for Improvement

Hannah Hayhurst, Newcastle upon Tyne NHS Foundation Trust; Lindsay Hennah, Newcastle upon Tyne NHS Foundation Trust; Beth Lambourne, Newcastle upon Tyne NHS Foundation Trust; Gail Halliday, Newcastle upon Tyne NHS Foundation Trust Elizabeth Reay, Newcastle upon Tyne NHS Foundation Trust Katie McDougall, Newcastle upon Tyne NHS Foundation Trust Anna Stansfeld, Newcastle upon Tyne NHS Foundation Trust

Introduction: Intensive and high-dose chemotherapy regimes requiring inpatient admission are common in treating sarcoma in both the curative and palliative setting. Giving chemotherapy as an inpatient has implications for bed space capacity and patient flow for the trust, as well as an impact on patients, particularly in the Teenage and Young Adult population who make up a large proportion of our patient cohort. Method: Data for elective admissions for the three most common inpatient chemotherapy regimes used in our centre: (doxorubicin/ifosfamide, VDC/IE and MAP) was collated from Chemocare and the electronic patient record from March 2023 to September 2024. Patients who had a prolonged admission for other medical reasons were excluded. Results: During the 18 month period patients spent a cumulative total of 521 days in hospital receiving chemotherapy. The range of duration of admission was 21.6 hours to 170 hours. The median duration for VDC was 33.6 hours, IE 134.4 hours, methotrexate 100.8 hours, AP 76.8 hours and doxorubicin/ifosfamide 98 hours. Discussion: With the average night in hospital costing the trust on average around £300, there are significant financial implications of patients receiving inpatient chemotherapy, as well as the impact on patient experience and bed capacity. We suggest three action plans to improve the current service – liaising with other sarcoma centres to share experience and protocols, an ongoing local review to amend the duration of Mesna infusion, and ultimately to develop a fully ambulatory sarcoma chemotherapy service with outpatient monitoring.

24. Optimizing Management and Follow-Up of Atypical Fibroxanthoma and Pleomorphic Dermal Sarcoma in Elderly Patients: A Protocol from North Bristol Trust

Harry Whitehouse, Southmead Hospital, North Bristol Trust; Gareth Ayre, Southmead Hospital, North Bristol Trust; Adam Dangoor, Southmead Hospital, North Bristol Trust; Samantha Leong, Southmead Hospital, North Bristol Trust Kathryn Harborough, Southmead Hospital, North Bristol Trust Rachel Clancy, Southmead Hospital, North Bristol Trust Giulia Colavitti, Southmead Hospital, North Bristol Trust Tom Chapman, Southmead Hos

Introduction: Atypical fibroxanthoma (AFX) and pleomorphic dermal sarcoma (PDS) predominantly affect elderly individuals and are linked to UV exposure, with most cases manifesting in the head and neck. AFX is a low-grade tumour with a local recurrence rate of 5% to 11% and a metastatic risk of 1% to 2%. In contrast, PDS is more aggressive, with local recurrence rates ranging from 7% to 69% and metastatic rates between 4% and 20%. PDS metastases most commonly occur in the lungs, often within three years, making a baseline chest X-ray (CXR) an important consideration. There is no standard follow-up protocol for PDS, but patient-specific approaches are recommended, accounting for age and co-morbidities. Methods and Results: At North Bristol Trust (NBT), the oncology team has developed a protocol following initial CT staging and management to minimise the burden on elderly, co-morbid patients, allowing follow-up in a peripheral setting: Baseline CXR is advised, followed by 6-monthly chest radiograph for three years. Suspicious findings warrant a CT chest and referral to the sarcoma multidisciplinary team for further management, including potential surgery or systemic therapy. For very co-morbid patients unfit for treatment, follow-up may be less appropriate. Conclusion: This protocol, emphasising streamlined care through primary care settings, has been implemented across the region served by NBT to reduce logistical challenges for patients while maintaining vigilant surveillance for recurrence or metastasis.

25. The Sarcoma UK support line team work in new ways to support patients during the referral process

Helen Stradling, Sarcoma UK; Sam Hackett, Sarcoma UK; Carly McDonald, Sarcoma UK; Ellis Lill - Sarcoma UK Alison Dunlop - Sarcoma UK Ben Casey - Sarcoma UK

Introduction: Since February 2016, the Sarcoma UK support line (SL) team have been supporting people affected by sarcoma. Over the last 18 months, the team have changed the way they work when supporting people who make contact pre-diagnosis. Previously, the team encouraged individuals to contact their clinical teams to ascertain the progress of their referral. However, the SL team now contact specialist teams directly to ensure referrals are following the correct path. Methods: When providing individuals with the tools to advocate for themselves, the SL team found that people were being directed to different departments and unable to obtain any answers, causing heightened anxiety. With the SL team contacting specialist teams directly, this helps the person potentially affected by sarcoma, but it also reduces the number of telephone calls to the clinical teams from worried individuals waiting for information. Results: Between August 2023 – November 2024, the SL team had 196 direct contacts with clinical teams regarding referrals. One team member made 9 telephone calls on behalf of one person to obtain the information required. This change in process has saved time and reduced anxiety levels for those people potentially affected by sarcoma. Conclusion: As NHS staffing and services are increasingly stretched, it is becoming more important for the charity sector to provide support. This change made by the SL team has had a positive impact on those individuals with suspected sarcoma.

26. Utility of 3-month surveillance scan following surgery for primary retroperitoneal sarcoma

Humaira Hussain, Queen Elizabeth Hospital, University Hospitals Birmingham NHS Trust; Marcus Nielsen, Max Almond, Anant Desai, Samuel Ford, Fabio Tirotta

Introduction: Surveillance imaging after retroperitoneal sarcoma (RPS) surgery is required to detect disease recurrence. The best timing for the first postoperative surveillance scan is unclear, and policies vary among institutions. Our study aimed to evaluate the utility of 3-month surveillance CT scan at detecting very early recurrence (VER) following RPS surgery. Method: Data on patients undergoing surgery for primary RPS between 2008 and 2023 at a tertiary sarcoma centre were retrospectively analysed. VER was defined as the evidence of local recurrence (LR) and/or distant metastases (DM) on the baseline CT-scan at 3 months post-surgery. Macroscopically positive resection margins (R2) were excluded. Results: Of the 297 patients undergoing surgery (median age 63 years, IQR 53-71), 13 (4.4%) developed VER; 5 patients developed LR, 6 DM, and 2 both LR and DM. Dedifferentiated liposarcoma and high-grade tumours (grade 2 and 3) affected 7 and 12 of the 13 patients with VER, respectively. Patients with VER were managed with further surveillance (4 of 13 patients), chemo/radiotherapy (4 of 13 patients), best supportive care (3 of 13 patients) and surgery/other treatment (2 of 13 patients). Three and 5-year overall survival rates were 38.5% and 0%, respectively. Conclusion: VER following RPS surgery is rare and often patients are managed with further surveillance. A 3-month surveillance scan may not be helpful in the detection of resectable disease and change the management of these patients.

27. Post-Treatment Response Patterns in Quantitative MR Biomarkers in UPS and ML STS Subtypes

Imogen Thrussell, The Institute of Cancer Research, The Royal Marsden Hospital; Jessica M Winfield, The Institute of Cancer Research, The Royal Marsden Hospital; Shane Zaidi, The Institute of Cancer Research, The Royal Marsden Hospital; Aisha Miah Khin Thway Christina Messiou Matthew D Blackledge, The Institute of Cancer Research, The Royal Marsden Hospital

Introduction: Myxoid Liposarcomas (ML) demonstrate higher radiosensitivity than other subtypes, including Undifferentiated Pleomorphic Sarcomas (UPS). Quantitative MR (qMRI) biomarkers are linked to underlying biological properties such as cellularity (ADC), diffusion anisotropy (FA), vascular density (EF) and tissue structure (MTR, R2, R1). qMRI may help us understand the differences seen in radiosensitivity between subtypes. Method: 15 extremity STS patients (9 UPS, 6 ML) received a multiparametric qMRI protocol at baseline and after completing RT as part of an ongoing trial. qMRI biomarkers were estimated: ADC, FA, MTR, FF, EF, R2 and R1 values. Regions of interest were drawn around the whole tumour and volume-median values extracted for each biomarker. Post-treatment change was defined as the post-treatment value minus the baseline value. Mann-Whitney U Tests were performed between the UPS and ML populations for the post-treatment changes for each biomarker. Results/Discussion: The post-treatment changes in ADC, FA, MTR and R2 were significantly different between the UPS and ML populations. For UPS the population median change in ADC was positive, suggesting UPS tend to increase in ADC values following treatment, whereas for ML the population median change was negative, suggesting ML tend to decrease in ADC values following treatment. The opposite was true for FA values. The ML population showed much larger changes in MTR, R1 and R2. Conclusion: ML and UPS demonstrate diverse response patterns in quantitative MRI biomarkers following RT. These differences may be due to differences in biological properties, reflecting the higher radiosensitivity of ML compared to other subtypes

28. Risk Factors for Reduced Physical Function and Health-Related Quality of Life following Lower Limb and Pelvis Bone Sarcoma Surgery

James M Gilling, Royal National Orthopaedic Hospital; Craig Gerrand, Royal National Orthopaedic Hospital

Background: Primary bone sarcomas are rare malignancies requiring multidisciplinary management, including surgery and chemotherapy. Surgical treatment often results in significant bone or tissue loss, impacting physical function and health-related quality of life (HRQoL). This study aimed to identify predictors of poor outcomes in patients with lower limb and pelvis sarcomas after surgery. Methods: This retrospective study included patients with lower limb or pelvis sarcomas treated at the Royal National Orthopaedic Hospital between January 2016 and January 2021. Patient-reported outcomes were assessed using the Toronto Extremity Salvage Score (TESS) and EuroQol-5 Dimension 5 Level (EQ-5D-5L) questionnaires at least six months post-surgery. Statistical analyses identified significant clinical predictors, further evaluated via multivariate analysis. Results: Of the 70 patients included in the analysis, 61 (87.1%) underwent limb-sparing surgery, and 9 (12.9%) had amputations. The mean follow-up was 15.2 months. The mean TESS, EQ-5D index, and EQ-5D visual analogue scale (VAS) scores were 66, 0.584, and 63, respectively. Proximal tumour location ($p = 0.048$) and larger tumour size ($p = 0.033$) independently predicted lower TESS scores. Proximal location ($p = 0.031$) and larger size ($p = 0.020$) also predicted reduced HRQoL. Procedure type (limb-sparing versus amputation) did not significantly influence scores. TESS strongly correlated with EQ-5D-5L scores ($p < 0.001$), showing reduced function predicts lower HRQoL. Conclusions: Proximal tumour location and larger size predict poorer functional and HRQoL outcomes, highlighting the need for tailored rehabilitation and informed decisions. Prospective studies are warranted to confirm these findings.

29. Angiomatoid fibrous histiocytoma: a multicentre case series

Javier Pozas, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK; Hala Shareef, Department of Medical Oncology, NHS Greater Glasgow and Clyde Hospitals, Glasgow, UK.; Khin Thway, Department of Pathology, The Royal Marsden NHS Foundation Trust, London, UK.; Andrew Hayes, Department of Surgical Oncology, The Royal Marsden NHS Foundation Trust, London, UK. Institute of Cancer Research, London, UK. Charlotte Benson, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK. Robin L Jones, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK. Institute of Cancer Research, London, UK.

Introduction: Angiomatoid fibrous histiocytoma (AFH) is a rare soft tissue tumour of uncertain differentiation with intermediate biological potential. While typically presenting as a localized and indolent lesion, some cases demonstrate local recurrence or metastatic spread. The aim of this study is to provide insights into the clinical presentation, histopathological features, molecular findings, and management outcomes of AFH, with a particular focus on metastatic cases. Methods: This multicenter retrospective study included 19 patients diagnosed with AFH between 1999 and 2023. Data on clinical features, tumour location, histological and immunohistochemical characteristics, next-generation sequencing (NGS) results, and treatment modalities were analyzed. Results: Patients ranged in age from 2 to 55 years, with a balanced gender distribution. Tumours were most frequently located in the extremities. Surgical excision was the primary treatment and five patients developed metastatic disease. NGS identified EWSR1::CREB1 or EWSR1::ATF1 fusions in most cases. Two patients treated with CVADo (cyclophosphamide, vincristine, actinomycin and doxorubicin) and one patient treated with weekly paclitaxel had a major partial response, and are now in prolonged remission after consolidation with local therapies, such as surgery and cryotherapy. Two patients with ALK overexpression received crizotinib upfront, with little benefit. Upon progression, one of them was given second generation ALK inhibitor and remains progression-free. Conclusions: AFH demonstrates a spectrum of clinical behaviours, with successful management relying on multidisciplinary management at specialist centres. Chemotherapy remains the cornerstone of metastatic disease management. Further research is needed to understand the impact of targeted therapy in patients with ALK overexpression.

30. Ossifying fibromyxoid tumours: a case series

Javier Pozas, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK; Andrea Napolitano, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK. Institute of Cancer Research, London, UK.; Khin Thway, Department of Pathology, The Royal Marsden NHS Foundation Trust, London, UK.; Julia Chisholm, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK. Ioanna Nixon, Department of Medical Oncology, NHS Greater Glasgow and Clyde Hospitals, Glasgow, UK. Robin L Jones, Department of Medical Oncology, The Royal Marsden NHS Foundation Trust, London, UK. Institute of Cancer Research, London, UK.

Introduction: Ossifying fibromyxoid tumour (OFMT) is a rare mesenchymal soft tissue sarcoma with uncertain differentiation and variable metastatic potential. The rarity of OFMT underscores the challenges in achieving evidence-based standardization of care. Although the molecular landscape of OFMT is largely unknown, they often harbour fusions involving the PHF1 gene, which plays a crucial role in histone methylation. The aim of this study is to describe the experience of our institution in managing patients with OFMT. Method: A retrospective analysis of 23 patients diagnosed with OFMT between 1993 and 2024. Results: The most common primary sites were the extremities and trunk. All patients underwent surgical resection of the primary tumour. Immunohistochemical analysis frequently revealed the expression of S100 protein and desmin, while next-generation sequencing identified PHF1 rearrangements in five cases, notably PHF1::EP400 and PHF1::TFE3 fusions. Five patients experienced local recurrence, and four developed metastatic disease. Two of these patients received systemic therapy. In both cases, frontline treatment with doxorubicin had limited efficacy (PFS 3 months). However, one patient with a PHF1::TFE3 fusion exhibited a remarkably durable response to a combination of

gemcitabine, which inhibits DNA methylation, and dacarbazine, after rapid tumour progression to doxorubicin. Conclusions: Given the limited clinical experience with OFMT, multidisciplinary tumour boards are crucial for tailoring individualized treatment strategies. The potential role of epigenetic dysregulation in OFMT tumorigenesis opens exciting avenues for treatment. This study contributes to the growing body of literature on OFMT, providing a foundation for future research.

31. Imatinib plasma trough level testing in Gastrointestinal stromal tumour (GIST) – potential benefits and cost implications in the age of generic imatinib

Jennifer Harrington, Cambridge University Hospitals NHS Foundation Trust; Madeleine Larkin, Cambridge University Hospitals NHS Foundation Trust; Dochka Davidson, Cambridge University Hospitals NHS Foundation Trust; Grace Rundle, Han Wong, Helen Hatcher, Gail Horan, Sarah Prewett, Ramesh Bulusu

Introduction Different generic formulations of imatinib are available for GIST patients, including Amarox (A), Teva (T) and Glivec. We previously identified increased toxicity with the Amarox preparation and progression in patients with imatinib sensitive mutations, potentially due to sub-therapeutic imatinib trough levels. Due to patient-reported improved tolerability with Amarox, we reviewed our patients taking imatinib 400 mg daily for whom PK plasma samples were available. Methods Patient demographics, treatment indication, imatinib version, adverse events and outcome data were collected from Cambridge GIST database. Imatinib and norimatinib trough levels were taken (optimal imatinib level ≥ 1.1mg/L; norimatinib 15-20% of imatinib), with a validated formula used to adjust values. Results n=22 (male 16, female 6); median age 67 years (range 50-84). Indication: neo-adjuvant 9, adjuvant 2, metastatic 11. A=14 patients, T=7 patients, Glivec=1 (self-funded). All patients had trough levels ≥ 0.73 mg/L, with most ≥1.1 mg/L. Progressive disease (PD) was seen in 3 patients, 1 on A and 2 on T, all with levels ≥1.1 mg/L. There was no significant difference in toxicity profiles between brands. Conclusion Compared to our previous data, there was no significant difference in tolerability, therapeutic trough levels or response rate between the brands of imatinib. This has important cost considerations (in Cambridge one cycle T=£300 vs A= £13.18). We are now routinely assessing imatinib trough levels both after initiating imatinib and in those on long term imatinib and plan to audit this with PK-guided dose interventions to optimise imatinib exposure in patients with low therapeutic levels.

32. A systematic review exploring the post-surgical psychosocial needs of patients diagnosed with soft tissue sarcoma.

Jill Kennedy, South Eastern Health and Social Care Trust

Background Soft tissue sarcoma diagnosis and its treatment trajectory can affect the psychological and social dynamics of patients. A sarcoma diagnosis is associated with psychosocial difficulties. Previous literature highlights that sarcoma patients have a poor quality of life and often suffer from social isolation. There is an absence of research considering the psychosocial needs of patients diagnosed with soft tissue sarcoma at different stages of the treatment pathway (Winnette et al., 2017). Given that sarcomas represent a rare and diverse group of cancers, it is important to explore the psychosocial needs of this patient group following surgery. Aim The primary aim of the systematic review was to explore the psychosocial needs of patients diagnosed with soft tissue sarcoma post-surgery via synthesis of quantitative and qualitative research in the area. Methodology A systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement was conducted. A combination of relevant search terms relating to the topic were devised. The electronic databases: Medline, CINAHL and PsychINFO were searched. Inclusion and exclusion criteria were identified and outlined. Reference lists of relevant articles were examined, and hand searches of journals was also undertaken. Data was extracted and the quality of each paper was assessed using two pre-determined critiquing tools. Results A total of 9 studies were included in the systematic review; one study was a qualitative research paper and the remaining eight were quantitative papers. Narrative synthesis was used to synthesise the information collected to identify themes and answer the research question. This was conducted and structured using a framework approach. Four overarching themes were identified: psychosocial impact, participation in life roles, information needs and clinical follow-up.

33. Adult orthopaedic oncology multi-disciplinary team teaching for inpatient ward staff

Jilpa Modessa, The Royal National Orthopaedic Hospital; Joanne Coleman, The Royal National Orthopaedic Hospital; Kate Scanlan, The Royal National Orthopaedic Hospital;

Background: The adult orthopaedic oncology Clinical Nurse Specialist (CNS) and therapy team at Royal National Orthopaedic Hospital (RNOH) manage diverse and complex cancer diagnoses. Informal feedback from the Adult ward staff highlighted a knowledge gap in understanding these complex diagnoses and how to best support cancer patients. Aim: Improve ward staff knowledge and confidence in managing sarcoma and metastatic bone cancer on adult inpatient wards. Method: This project used a quality improvement project using Plan-Do-Study-Act (PDSA) cycle methodology. To establish this teaching programme, we met with the ward manager to understand best how to deliver teaching in a busy ward setting. A weekly 20-30 minute session in the ward conference room was agreed. A holistic teaching programme to address knowledge gaps which was structured into four comprehensive blocks: 1) Cancer: diagnosis, treatment, emotional impact; 2) Sarcoma: diagnosis, treatment, pathways/ CNS role; 3) Soft Tissue Sarcoma: Surgery, treatment, rehabilitation; 4) Bone Sarcoma: Surgery, treatment, rehabilitation. Staff were required to complete baseline measure detailing current knowledge and confidence regarding management of orthopaedic oncology conditions. As a part of the PDSA cycle, ongoing evaluation is integral to ensure the effectiveness of programme and make changes. Therefore, we are collecting feedback from staff at the end of block 2. Results: We are currently progressing through block 1 and 2, with 6 sessions completed. On average, 6 staff members attend the sessions, with majority being nursing staff n=32) following by Healthcare Assistant (n=6) and Allied Health Professionals (23), with a total of 61. The duration of employment ranged from 4 months to 20 years, with 85 % of staff having no or some previous experience in cancer. Conclusions: Teaching sessions have been well received, with informal feedback being very positive. We will obtain formal feedback after block 2 to ensure staff learning needs are being address and to implement any necessary changes. Impact: Improve ward staff knowledge and skills in cancer management to improve patient care. Keywords: Cancer, Sarcoma, Teaching Reference: Hayes, AJ. (2024) 'UK guidelines for the management of soft tissue sarcomas' British Journal of Cancer;

34. Patient feedback of the Prehabilitation pathway for the East Midlands Sarcoma Service

Jo Bacon, Nottingham University Hospitals NHS Trust; Lynsey Green, Nottingham University Hospitals NHS Trust

Introduction: Prehabilitation is an important part of the sarcoma patient pathway due to complex emotional, physical and rehabilitation needs. A formal prehabilitation pathway streamlining the process and ensuring equity across the East Midlands Sarcoma Service (EMSS) was developed in 2022 and continues to evolve. Method: Patients with soft tissue sarcomas, undergoing adjuvant radiotherapy, receive physiotherapy-led prehabilitation. Prehabilitation includes individualised exercise plus education and signposting for general fitness, nutrition,

emotional wellbeing and practical preparation for surgery. A feedback questionnaire is sent out to patients 1 month post surgery.. Results: 30 patients have completed prehabiltation, of these, 16 would not have previously received Sarcoma Specialist Physiotherapy input during neo-adjuvant Radiotherapy due to their geographical location. For Clinicians, the service has aided early identification of anticipated post-operative challenges, timely referral to other MDT members and aided CNS/AHP communication across the region. Of 16 Patient respondents, all preferred 1:1 sessions, and sessions led by sarcoma specialist Physiotherapists (versus generic prehab). 14 respondents scored the benefit of Prehab as at least 8 out of 10 with 14 responses scoring at least 8 out 10 when asked to rate how much Prehab helped them to feel prepared for surgery. Conclusion: The introduction of a prehabiltation pathway has improved equity in pre-treatment rehabilitation for patients across the EMSS. Overall, the service has been positively evaluated by patients. Further development plans include joint CNS/AHP Prehab clinics to widen multidisciplinary input.

35. Improving the Biopsy Pathway for Sarcoma Patients

Joanne Coleman, Royal National Orthopaedic Hospital

Introduction: RNOH patients currently receive unexpected biopsy calls, causing communication issues and inefficiencies for the CNS team. No standard day or method exists for these calls, and imaging schedulers handle low-suspicion cases, complicating the process. Clearer pathways are needed for better patient support. The aim of this project is to improve communication with patients and improve efficiency by creating a distinct pathway for patients undergoing biopsy for high or low suspicion. Method: Using the Plan-Do-Study-Act cycle methodology, the CNS team identified problems with the existing pathway and collaborated with the Quality Improvement team to develop a solution. Data on CNS workload and email traffic were collected, and feedback from staff and patients was gathered through questionnaires. Key stakeholders attended a workshop to present the new pathway, and meetings with radiology and pre-operative assessment teams were held to ensure support. Results: Initial feedback demonstrates poor communication with patients, and inconsistent pathways between MDT, radiology and CNS team. The new biopsy clinic launched on 6th September. Initial feedback shows improvement in patient communication and improved efficiency within the team, as well as better coordination between MDT, radiology, CNS team and POA. Ongoing evaluation is planned via staff and patient questionnaires. Conclusions: While the current biopsy pathway is recognized as inefficient, the introduction of the high suspicion pathway marks a significant step toward improving communication and efficiency. Full implementation of the low suspicion pathway is anticipated in October, with ongoing evaluations expected to confirm improved outcomes for both staff and patients.

36. A pilot survey of patient experiences of communication with healthcare providers in the diagnosis of musculoskeletal tumours

Joseph E McKay, Trauma & Orthopaedic Department, Glasgow Royal Infirmary; Reece, A., Trauma & Orthopaedic Department, Glasgow Royal Infirmary; Vaughan, S., Trauma & Orthopaedic Department, Glasgow Royal Infirmary; Doonan, J. Glasgow Royal Infirmary. Mahendra, A. Glasgow Royal Infirmary. S, Gupta. Glasgow Royal Infirmary.

Introduction: Clear communication is vital in the care of tumour patients due to the complexity of diagnoses, investigation and management. There is very little qualitative research addressing the influence of communication in patient understanding and positive experiences of care in managing musculoskeletal tumours. Methods: The most recent 10 new patients seen in the orthopaedic oncology clinic at a single tertiary centre were invited to take part in a 26-question online survey delivered using the NHS Scotland secure Microsoft Forms service. The questions addressed how much information patients were given, and in what manner, at each step of their patient journey up to diagnosis in the clinic. Results: All patients reported that their GP advised them of the reason for any investigations and informed them they would be referred to an orthopaedic service but only half were given a possible diagnosis. Most patients reported being well informed after the general clinic but two were still not clear about their diagnosis until being seen in the orthopaedic oncology clinic. Two patients were dissatisfied with specific poorly-considered phrases on the part of the healthcare provider. Discussion: This study represents the first attempt, to our knowledge, to qualitatively analyse the communication between healthcare professionals and patients with musculoskeletal tumours. There is great variation in the level of understanding patients have before being seen at the tertiary centre. Whilst most patients were happy with the communication and information they were given, it is clear that specific phrases have significant implications for patient understanding and satisfaction.

37. Analysis of postoperative complications following palliative resection of soft tissue sarcoma at East Midlands Sarcoma Service

Joshua Howard, The University of Nottingham, Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom; Jennifer Mackay, Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom; Nicholas Eastley University Hospitals Leicester NHS Trust, Leicester, United Kingdom Kathryn Steele Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom

Introduction Palliative resection of sarcoma can be offered to alleviate symptoms and improve quality of life. The impact of palliative resection on patient outcomes, including postoperative complications, remains unclear. Aim To determine the outcome following palliative resections of sarcoma in East Midlands Sarcoma Service, focusing on post-operative complications, overall survival (OS) and length of hospital stay (LOS). Methods A retrospective clinical evaluation of patients who died within 2 years of surgery for primary tumour since 2016. Patient records were accessed through digital NHS databases confirming details of treatment, complications and survival. Results 18 patients underwent surgery for primary sarcoma with recorded palliative intent. Median OS following resection was 11.51 months [95% CI: 3.33-19.68]. Median LOS was 4.00 days [95% CI: 0.00-8.16]. Major postoperative complications occurred in 3 procedures (16.67%); 15 procedures (72.22%) had minor postoperative complications. Patients with undifferentiated sarcoma had a lower median OS (3.48 months [95% CI: 2.19-4.77]) and longer median LOS (6.00 days [95% CI: 4.04-7.96]) compared to those with angiosarcoma (OS 21.34 months [95% CI: 8.35-34.33], LOS 3.00 days [95% CI: 0.86-5.15]) and leiomyosarcoma (OS 9.21 months [95% CI: 0.65-17.77], LOS 1 day [95% CI: 0.00-3.40]). Age did not significantly influence OS or LOS. Conclusions Palliative resections of sarcomas at NUH are associated with a high incidence of postoperative complications. Sarcoma subtype may influence OS and LOS following palliative resection. A holistic approach including consideration of alternative symptom management strategies should be evaluated prior to offering palliative resections. Further research with larger patient cohorts is required.

38. Real-World Efficacy and Toxicity of Cabozantinib in Sarcoma

Kabo Mohame, Queen Elizabeth Hospital Birmingham; Mariam Jafri, Queen Elizabeth Hospital Birmingham; David Cater, Queen Elizabeth Hospital Birmingham; David Peak, Mohamed Rogi, Jenny Sherriff.

Background: Metastatic sarcoma has apoor prognosis, with limited treatment options. Cabozantinib has shown promise in patients with Ewing sarcoma, GIST, osteosarcoma, and is being actively evaluated in numerous sarcoma subtypes Methods: Single centre retrospective review of patients treated with cabozantinib between 2021-2024. Data were collected through a standardized proforma. Results: 11 patients (9 male, 2 female) were treated with Cabozantinib . This included: 5 patients with metastatic GIST, 2 with Ewing sarcoma, 2

with osteosarcoma, 1 with synovial sarcoma, and 1 with rhabdomyosarcoma. All patients started on a 60 mg ,for a median of 3 cycles (1-6). Toxicities included: PPE, 3 patients with lymphopenia, hypophosphatemia in 4 patient's had hypomagnesemia. 2 patients had grade 3 anaemia , and 4 cases mucositis. 5 patients required dose reductions for PPE and anaemia , mucositis and 2 discontinued due to PPE and GI bleed. 1 patient remains on treatment. Progression-free survival (PFS) for GIST was 4 months, with overall survival (OS) of 7 months. Ewing sarcoma had a PFS of 3 months and OS of 4 months. Synovial sarcoma showed a PFS of 7 months and OS of 14 months. Osteosarcoma patients had a median PFS of 1 month and OS of 2 months. Alveolar rhabdomyosarcoma had a PFS of 16 months and OS of 17 months. Conclusion: Cabozantinib demonstrated variable efficacy in heavily pre-treated sarcoma patients, with promising results in synovial sarcoma and rhabdomyosarcoma. Tolerability was a concern, with frequent dose adjustments and interruptions.

39. Living with Sarcoma: What is the impact on daily life, activity participation and how to move forward? Prelimary Findings.

Kate Scanlan, Royal National Orthopaedic Hospital; Clarissa Allie, Brunel University; Carmel Butterfield, Brunel University; P Smyrni, R Tehrany, S Furtado & C Gerrand

Background: Sarcoma is a rare and aggressive form of cancer often requiring multimodal treatment, including surgery. Treatment often results in significant physical and emotional impacts on life, as well as loss or changes to identity. Despite this, there is noteable lack of research in this area. Aims: To explore the impact of Sarcoma treatment on ability to partipate in daily activities, impact on roles/ identity and process of adaptation. Method: This sub-study is as apart of wider research project – Stanmore Tumour OutcoMes Project [STOMP]. Using a qualitative research design, participants were purposively sampled from an existing pool of STOMP participants. Eligibility included a sarcoma diagnosis that required signifcant limb surgery, over 18 years old and > 6 months following surgery. Semi-structured interviews were conducted via MS Teams. Transcripts were audio recorded and transcribed verbatim before thematic analysis was completed. Results: Eight participants (5 male, 3 female) aged between 21 – 64 years old were included. Most underwent lower limb endoprosthetic replacements [EPR] (n=6), one lower limb amputation and one upper limb EPR. Most participants had osteosarcoma (n=3). Six participants underwent chemotherapy. Range of time since surgery was 2- 8 years post. Five preliminary themes identified: (1) Physical impact, (2) Psychological impact, (3) Daily living routines, (4) Roles and (5) Coping and managing the impact. Conclusion: Living with Sarcoma is marked by significant physical and emotional challenges that often extend beyond treatment. Preliminary findings suggest that participants in this study have mostly been able to adjust and adapt to challenges faced over time.

40. Patient and clinician experience of integrating an advanced practitoner role into sarcoma clinical practice

Katy Ellis, University College London Hospital;

Patient and clinician experience of integrating an advanced practitoner role into sarcoma clinical practice Katy Ellis Sarcoma Department, University College Hospital, London, United Kingdom. Introduction The role of Sarcoma Advanced Nurse Practitioner (ANP) evolved into a full-time position in April 2024 to manage adult patients with sarcoma undergoing systemic treatment. Objective An additional ANP clinic was established with the intention of providing on-treatment reviews to "fit" patients for chemotherapy with the aim of reducing pressures on consultant clinics, improving patient experience, and integrating the advanced practice role within sarcoma. Our objective was to audit the ANP clinic activity and assess the impact of this nursing role and clinic on sarcoma patient care and experience and the wider sarcoma team at University College Hospital London (UCLH). Methods This descriptive study reviewed consecutive sarcoma patient referrals to the Sarcoma ANP on-treatment clinic between September and November 2024. The referral criteria for the Sarcoma ANP clinic included adult sarcoma patients over the age of 25 being treated with neo-adjuvant, adjuvant, and palliative chemotherapy protocols at the discretion of the sarcoma consultant. A standard operating procedure for the Sarcoma ANP clinic was written to define and demonstrate scope of practice, eligibility criteria and post holder requirements. Clinical governance considerations were addressed to ensure a clear and safe scope of practice for the ANP. Demographic and clinical data was obtained from the patient's electronic clinical records. Patient and clinician feedback was collected through experience surveys. Results 63 patients were reviewed in the on-treatment clinic between September and November 2024. 58% were treated with curative intent protocols vs. 42% treated with palliative intent. The median age of patients was 53 years (range 25-79). The main clinical activities included toxicity assessment, blood interpretation, prescribing of chemotherapy and review of supportive investigations. Conclusion Integration of an ANP on-treatment clinic for sarcoma offers specialist clinical assessment of patients undergoing systemic treatment, maintaining high standards of patient care while reducing the burden on consultant clinics. An ongoing patient and clinician experience survey supports these findings. The development of advanced practice in sarcoma improves multi-disciplinary working while providing a holistic approach to patient treatment and care.

41. OxPOS experience of real-world data integration with the navify® Clinical Hub for Tumor Boards

Kinga Varnai, Oxford University Hospitals NHS Foundation Trust; Theresa Noble, Oxford University Hospitals NHS Foundation Trust; Hiznih Salih, Oxford University Hospitals NHS Foundation Trust; Charles Crichton, University of Oxford Andrew Haworth, Roche Information Solutions Liam Orrell, Roche Information Solutions Andrew Osman, Roche Consulting Andrew B Hassan, University of Oxford Jim Davies, University of Oxford

Effective decision-making in sarcoma care relies on the availability and integration of comprehensive, real-time patient data. The Oxford Precision Oncology for Sarcoma (OxPOS) study aims to improve clinical decision-making and streamline multidisciplinary team (MDT) meetings by establishing data flows from hospital systems to integrate data into navify® Clinical Hub for Tumor Boards (navify® CH). The hospital involved is a large teaching hospital, and a referral centre for sarcoma management, with systems representative of those used across the UK National Health Service (NHS). A key objective is the evaluation of the impact of the presentation of the integrated data in navify® CH on the accuracy of clinical decision-making and conduct of MDT meetings. The establishment of data flows was complicated by a lack of interoperability: the systems were unable to provide data in FHIR (fast healthcare interoperability resources) format, and some data existed only within unstructured documents. The hospital team developed software to extract and convert data to FHIR format while the navify® team was able to support flat file uploads, avoiding significant delay. Preliminary findings show marked improvements in the quality and efficiency of MDT team working, with clear benefits to clinical decision-making and optimal resource utilisation. The integration and presentation of data within navify® CH has also identified potential improvements to hospital systems and data practices, including adoption of standards and availability and consistent use of suitable data capture forms. These findings create the opportunity to scale this model across the NHS and improve healthcare delivery for cancer patients.

42. Audit of Radiotherapy Limb Immobilisation

Kirsty Thornton, Nottingham University Hospitals; Jonathan Allred, Nottingham University Hospitals; Samantha Stevens, Nottingham University Hospitals; James Osborne (Nottingham University Hospitals)

Introduction Immobilisation for limb radiotherapy varies throughout the UK and worldwide, there is little literature examining what products or techniques are the best. At Nottingham University Hospitals custom limb immobilisation (limb boards) are manufactured. An audit was conducted to assess the efficacy of the limb boards as patient immobilisation, to inform future practice. Method Data was collected retrospectively. Inclusion criteria: sarcoma limb diagnosis; custom limb board made between 2021-2023; minimum of 10 fractions; CBCT verification. Using guidance from On Target 2 the random and systematic errors for individuals and the population were calculated. An appropriate PTV margin was derived as a measure of consistency in patient set ups. Imaging frequency was also reviewed. Results Imaging and demographic data was collected from 35 patients. Data from 616 online CBCTs showed that for most patients the displacement varied between positive and negative directions throughout their treatment, therefore it was often not possible to establish a trend. On average patients had 2 systematic shifts throughout their treatment, and for most a move to daily imaging was required. Conclusion The data showed patient positioning was variable, the literature suggested that other immobilisation devices produce similar results. Therefore, NUH limb boards are fit for purpose, and comparable with other limb immobilisation devices. However, due to the set-up variability shown, a move to daily imaging for all limb patients was recommended and implemented. This recommendation is in line with the RCR's guidance for Sarcoma Limbs with a PTV margin of 5mm or less. Simões R, Miles E, Yang H, et al. IMRiS phase II study of IMRT in limb sarcomas: Results of the pre-trial QA facility questionnaire and workshop. Radiography. 2020;26(1):71-75. https://doi.org/10.1016/j.radi.2019.08.006 The Royal College of Radiologists (June 2021). On target 2: updated guidance for image-guided radiotherapy. Available at: https://www.rcr.ac.uk/media/2pvoxjcp/rcr_publication-on-target-2-updated-guidance-for-image-guided-radiotherapy.pdf (Accessed 18 March 2024). Mohamed R, Shuja M, Al-Hazienh A, et al. A retrospective comparison of two different immobilization systems for radiotherapy of extremity soft tissue sarcomas and its influence on CTV-PTV margin. J Egypt Natl Canc Inst. 2021;33, 27. https://doi.org/10.1186/s43046-021-00076-2 Dickie C, Parent A, Griffin A, et al. A Device and Procedure for Immobilization of Patients Receiving Limb-Preserving Radiotherapy for Soft Tissue Sarcoma. Medical Dosimetry. 2009;34(3):243-249. https://doi-org/10.1016/j.meddos.2008.10.003

43. 3D-modelling in planning surgery and analysing patterns of recurrence in maxillofacial osteosarcomas

Krupali Parikh, UCL; Deepti Sinha, UCL; Simon, Morley;

Osteosarcoma is a sub-type of bone sarcomas that are rare mesenchymal tumours. Head and neck (HN) osteosarcoma account for <1% of all HN malignancies. Multi-modality approach has improved treatment, but recurrence in HN osteosarcomas is between 17-70%, significantly higher than 5-7% of the extremities. Maxillary osteosarcomas have higher recurrence, usually inoperable with a poorer prognosis. Currently, achieving negative surgical margins is the only significant predictor of overall and disease-specific survival. A pilot study was performed using recurrent and non-recurrent maxillary osteosarcoma cases. CT-based 3D-models were constructed pre-operatively, post-operatively and at recurrence. The 3D-models were superimposed and the distance between the original tumour and the surgical resection margins was measured. These measurements were correlated with histopathology margins to analyse recurrence patterns. Recurrence occurred (i) at close or tumour-free bone resection margins of <10mm, (ii) superior or posterior to the location of the primary tumour, and (iii) at a distant site within the same bone, despite microscopic histopathology tumour-free margins. Non-recurrent patients had tumours located more anteriorly, a better therapy-related response, and underwent radical resections. This is an original study demonstrating that CT-based 3D-modelling can be useful in identifying recurrence patterns in maxillary osteosarcomas. Larger, multi-institutional, prospective studies are required for confirmation.

44. Evaluating Radiomic Feature Robustness for PET/CT Imaging in a Phantom and Sarcoma Patient Dataset

Lara Bonney, Sir William Dunn School of Pathology, University of Oxford; Daniel McGowan, Department of Medical Physics and Clinical Engineering, Oxford University Hospitals NHS Foundation Trust; Andrew Bassim Hassan, Sir William Dunn School of Pathology, University of Oxford; Daniel McGowan Senior Author Oxford University Hospitals NHS Foundation Trust

Sarcoma patients are regularly assessed through medical imaging. PET/CT provides unique information on tumour metabolism. Sarcomas often present as highly heterogeneous tumours, however, this is not quantified from medical imaging. Radiomics, the extraction of quantitative metrics from medical images, has been shown to have predictive value for various clinical outcomes. While this demonstrates the potential of quantitative image analysis in patient pathways, the path to clinical adoption has been limited primarily due to issues surrounding reproducibility and robustness of metrics extracted. In this work the robustness radiomic features was assessed in phantom (a control object of known spatial signal distribution) and sarcoma patient data (N=20). 93 international biomarker standardisation initiative (IBSI) radiomic features were extracted from each image using Pyradiomics (V3.0.1a3) with tumour segmentation performed by an experienced nuclear medicine radiologist. The effect of changes in image noise characteristics and deep-learning image enhancement algorithms on radiomics features was assessed. Features were ranked for robustness to changes in image noise and correlation between phantom and patient datasets was measured. A high proportion of features (phantom: 77%, tumour: 88%) displayed high variability (>15%). High correlation was observed between feature variability in the phantom and tumour data, demonstrating the utility of phantoms in assessment. The next stage of this work is to apply these findings in a study of PET/CT radiomics in a retrospective Oxford cohort over a ten-year period (N=1500, 3500 imaging studies). A PPI group formed for this project have contributed to the lay communication of results.

45. OxPOS functional 18FDG-PET-CT radiomics for the evaluation of metabolic heterogeneity in high grade sarcoma.

Lara Bonney, UNIVERSITY OF OXFORD; Kevin Bradley, University of Cardiff; Andrew B Hassan, UNIVERSITY OF OXFORD; Kevin M Bradley Wales Research and Diagnostic PET Imaging Centre, University of Cardiff ---------- Lara Bonney is also associated with: Department of Medical Physics and Clinical Engineering, Oxford University Hospitals NHS Foundation Trust Andrew Hassan is also associated with: Oncology and Haematology, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom Daniel McGowan is also associated with: Department of Oncology, University of Oxford, Oxford, United Kingdom

Sarcoma patients are routinely evaluated using medical imaging. While magnetic resonance imaging (MRI) and computed tomography (CT) remain commonly used modalities for sarcoma staging, positron emission tomography (PET/CT) also provides unique insight into tumour metabolism. Sarcomas often exhibit marked heterogeneity in 18FDG distribution, yet this characteristic is not routinely quantified from imaging. Radiomics—the extraction of quantitative features from medical images—enables detailed assessment of tumour properties, including spatial heterogeneity, a feature not well quantified from other 'omic data. Evidence supports the predictive value of radiomic features for various clinical outcomes. Here, we evaluated a cohort of high-grade sarcoma (OxPOS) to integrate radiomic data the potential for radiogenomics and integration with pathology data. At this interim stage, radiomic features have been extracted from PET/CT scans of 72 patients, representing a diverse range of sarcoma subtypes. 93 international biomarker standardisation initiative (IBSI) radiomic features were extracted

from each image using pyradiomics (V3.0.1a3) with tumour segmentation performed by an experienced nuclear medicine radiologist. Preliminary analysis has deployed clustering techniques to identify patterns within the patient cohort based solely on radiomic features. Early results demonstrate wide variation in radiomic feature measurements across the cohort. With some key trends identified between cluster groups. Analysis is ongoing to understand trends between cluster groups and begin to integrate radiomic data with other 'omic data. Further investigation of radiomics and metabolic heterogeneity offers quantitative assessment of sarcomas that may provide a step change in functional evaluation.

46. Can group physical activity classes reduce isolation and increase physical well-being in patients with Sarcoma?

Laura Mitham, Royal National Orthopaedic Hospital; Victoria Mackenzie, Royal National Orthopaedic Hospital; Shea Byrne, Royal National Orthopaedic Hospital;

Introduction The aim was to explore if running a supervised sarcoma specific exercise group will help post-operative limb salvage and amputee patients increase their exercise tolerance, confidence in mobilising and benefit from peer support? Robust evidence already supports this but it had never been piloted at Royal National Orthopaedic Hospital (RNOH). Method Patients were referred to a 6 week group from RNOH outpatient physiotherapists. Inclusion: >6months post op, nil active treatment, independent mobility +/- gait aids. They completed a feedback form regarding their current confidence in exercising, exercise frequency and what they would like to get from attending the group. They also completed: Timed Up and Go (TUG); EQ5D and the 30 second chair stand test. On finishing, patients provided feedback. We requested suggested improvements of group structure and content, exercise frequency and confidence levels. TUG; EQ5D and the 30 second chair stand test were repeated Results Although only 6 participants, feedback reported that patients enjoyed the opportunity to speak to peers & gain confidence in completing more high level exercises. On average patients improved their STS score by two reps and reduced their TUG time by 1.3 seconds. Conclusion Piloting the program shows there is a need for such a group activity – feedback showed that patients felt less isolated and gained confidence in completing more exercises at home or start to think about joining a gym. Feedback has been extremely beneficial in how we take the group further, a change in criteria will enable more patients to attend.

47. OxPOS synthesis of Patient and MDT Team Communication Strategies in Advanced Sarcoma Care

Lisa Hinton, UNIVERSITY OF OXFORD; Chloe Phillips, UNIVERSITY OF OXFORD; Andrew B Hassan, UNIVERSITY OF OXFORD;

Advancing sarcoma care is complex and presents unique innovation challenges. For example, artificial intelligence (AI) and novel technologies promise to revolutionise standard of care, remove bias from decision making and streamline care pathways. Currently the NHS standard of care involves a multi-disciplinary team meeting of oncologists, surgeons, radiologists and geneticists, who gather to consult on the patient care pathways. One concern is that this model is becoming increasingly inefficient and risks biased decision making that might impact on patient outcomes. New AI technologies such as Large Language Models and decision-making platforms offer the possibility of mitigating these issues. In planning for the implementation of new technologies, we first need to understand how communication works within the MDTs, patients and staff. What are their strategies and how can we optimise these? Here, OxPOS seeks to explore innovations in care for sarcoma patients. As part of a social science sub study, we are conducting a critical interpretive synthesis (CIS) to gain a comprehensive understanding of the current literature on communication within sarcoma care, cancer care and multi-disciplinary teams more broadly. This synthesis method developed by Dixon-Woods et al supports the development of explanatory theory and is particularly well suited to complex areas of interest that encompass many methods, fields of study and document types. Our initial CIS findings will generate a critical interpretation of the literature that can aid our understanding, to include: communication barriers, importance of effective patient communication, impact of hierarchical structures and strategies for improving communication.

48. Prehabilitation in extremity soft tissue sarcoma – opportunities and benefits: A case study.

Lucy Dean, The Royal Marsden Hospital; Gemma Chilvers, The Royal Marsden Hospital; Kate Dunne, The Royal Marsden Hospital;

Introduction Whilst the benefits of prehabilitation are evidenced in common cancers [1,2], research in sarcoma is lacking [3,4]. Consequently, it is not embedded in practice. This case-study aims to highlight the potential value of prehabilitation to patient outcomes and experience in extremity soft-tissue sarcoma (ESTS). It is intended that findings provide consideration for practice, service improvement and research. Methods Case study. A 72-year-old female with a lateral-thigh myxofibrosarcoma was referred to physiotherapy during neo-adjuvant radiotherapy. Following assessment, she was referred for prehabilitation, completing ten supervised exercise sessions over eight weeks. Physical activity (PA) levels, physical fitness (PF) and quality-of-life (QoL) were measured pre- and post-prehabilitation, with PA/PF measures repeated 10weeks post-operatively. Length-of-stay (LoS) data and patient/physiotherapist feedback were obtained. Results Outcome measures repeated post-prehabilitation showed: Increased PA levels: Godin Leisure-Time Exercise Questionnaire score increased from 21-moderately active to 31-active. Improved PF: 30-second sit-to-stands (30STS) increased from 7-below average to 12-average. The time taken to complete five timed sit-to-stands (5XSST) reduced from 20.36 to 11seconds. Improved overall QoL (EQ5D-5L). However, whilst mobility and self-care improved, psychological QoL deteriorated. At 10 weeks post-surgery: PA levels equalled baseline. PF remained greater than baseline but less than post-prehabilitation: 30STS:9; 5XSST:16.63). Los was 2-3 nights less-than predicted. Qualitative findings highlighted the value of prehabilitation in addressing needs and optimising preparation for surgery, including managing expectations. Conclusion Findings suggest that prehabilitation during/after neo-adjuvant radiotherapy for ESTS is feasible and could improve patient experience and outcomes. Research to identify effective models of prehabilitation in ESTS is needed. References Macmillan Cancer Support (2020) Prehabilitation for people with cancer. Principles and guidance for prehabilitation within the management and support of people with cancer. https://www.macmillan.org.uk/healthcare-professionals/news-and-resources/guides/principles-and-guidance-for-prehabilitation Silver JK (2015) Cancer prehabilitation and its role in improving health outcomes and reducing health care costs. Semin Oncol Nurs 31 (1):13-30. https://doi.org/10.1016/j.soncn.2014.11.003 Gerrand C, Furtado S. (2017) Issues of Survivorship and Rehabilitation in Soft Tissue Sarcoma. Clin Oncol 29 (8):538-545. http://dx.doi.org/10.1016/j.clon.2017.04.00 McCarthy, M., Dean, L., Artis, D., Green, L., Khouri, M., Gerrand, C. and Furtado, S. (2024): Development of clinical practice guidelines for rehabilitation after diagnosis for primary bone and soft tissue tumours. Disability and Rehabilitation. https://doi.org/10.1080/09638288.2024.2422471

49. The Redevelopment of Sarcoma Service Referral Pathways at Nottingham University Hospitals NHS Trust

Lynsey Green, Nottingham University Hospitals NHS Trust; Kathryn Steele, Nottingham University Hospitals NHS Trust; David Simmons, Nottingham University Hospitals NHS Trust; Anna Raurell; Nottingham University Hospitals NHS Trust Nicholas Eastley; University Hospitals of Leicester NHS Trust Robert Ashford; University Hospitals of Leicester NHS Trust

Background: Referrals to the East Midlands Sarcoma Service are increasing annually, placing additional stress on resources allocated to support the timely diagnosis of soft tissue tumours. An audit in 2022 showed only 34% of referrals received on local Sarcoma Two Week Wait (2WW)/Urgent Suspected Cancer Pathway were considered appropriate (defined as requiring urgent investigation.) To address these issues we aimed to reconfigure our local referral and diagnostic pathways for soft tissue lesions. Methods: In December 2021, a steering group was formed including representatives from the Sarcoma service at Nottingham University Hospitals NHS Trust (NUH), primary care and the local Integrated Care Board. A range of changes were subsequently implemented including 1) a protocolised nurse-led routine pathway for benign soft tissue lumps, 2) new urgent suspected cancer pathway (2WW) and routine referral forms, 3) new GP referral guidance documents, 4) real time Advice & Guidance for healthcare workers in primary care considering referral and 5) the implementation of I-Refer (decision making tool) to prioritise ultrasound requests based on concerning clinical features. Data was collected for March 2023 and October 2023 to investigate the effects of the above changes. Results: The average number of soft tissue 2WW referrals received reduced from 16 to 8 per week. Similarly, the average number of weekly soft tissue tumour triage MDT discussions fell from 28 to 17, reflecting the reduction in the number of benign patients on the Urgent Suspected Cancer (2WW) Pathway. Conclusion: Changes to the NUH sarcoma referral pathways reduced the number of inappropriate referrals and therefore the number of patients with benign conditions on the Urgent suspected cancer pathway, allowing resources to be focussed on those truly concerning referrals.

50. An in-vitro investigation of 5-Aminolevulinic acid mediated photodynamic therapy in soft-tissue sarcoma

Marcus Brookes, The Newcastle upon Tyne Hospitals NHS Foundation Trust; Rebecca Maggs, Newcastle University; Kenneth Rankin, The Newcastle upon Tyne Hospitals NHS Foundation Trust;

Introduction Surgical resection with a negative margin remains the cornerstone of curative management in soft tissue sarcoma (STS), with positive margins associated with poor survival outcomes. Photodynamic therapy (PDT) describes the administration of a photosensitizer followed by exposure to light, resulting in intracellular reactive oxygen species (ROS) production, ultimately causing cell death, and is an established treatment in non-melanomatous skin cancer. This may have potential as an intra-operative adjunct in STS to kill any remaining cancer cells. Methods Myxofibrosarcoma (MFS) and undifferentiated pleomorphic sarcoma (UPS) cells were incubated with varying concentrations of 5-ALA (0-4mM) for 4 hours prior to experiments. Cellular uptake of 5-ALA was quantified using flow cytometry. PDT was performed by exposing cells to red light (630nm, total dose 20J/cm2). Cellular viability was measured using a CCK-8 assay. The production of reactive oxygen species (ROS) was quantified using the CellROX green assay and fluorescence microscopy. Results Both UPS and MFS cells demonstrated uptake of 5-ALA, with significantly higher fluorescence compared to the negative controls across all concentrations ($p<0.05$). PDT with 5-ALA induced cytotoxicity in both MFS and UPS cells, with decreased viability compared to control groups at 48 hours (7.5% vs 93.4%, $p<0.0001$ and 5.2% vs 79.6%, $p<0.0001$ respectively). Cellular ROS were significantly increased in MFS and UPS cells undergoing PDT ($p<0.001$). Conclusions PDT using 5-ALA induces cell death in STS cells, likely mediated by ROS production. Development of a mouse model will help to ascertain whether its use intraoperatively may result in reduced rates of local recurrence.

51. Biodegradable temporising matrix (BTM) for the reconstruction of soft tissue defects following the resection of soft tissue sarcoma

Marcus Brookes, The Newcastle upon Tyne Hospitals NHS Foundation Trust; Samuel Crow, The Newcastle upon Tyne Hospitals NHS Foundation Trust; Christopher Lewis, The Newcastle upon Tyne Hospitals NHS Foundation Trust; Kenneth S Rankin, Thomas Beckingsale, Kanishka M Ghosh, Maniram Ragbir, Timothy P Crowley

Introduction Sarcomas are rare, aggressive cancers, arising most commonly from the soft tissues. Surgical resection with a cuff of normal tissue is the cornerstone of curative management. This often leaves a large soft-tissue defect, requiring complex reconstruction. Biodegradable temporising matrix (BTM) is a novel dermal substitute for complex wound reconstruction. It is designed to allow the development of granulation tissue prior to skin grafting and is capable of bridging un-graftable surfaces such as exposed bone or tendon. The use of BTM for the reconstruction of soft tissue defects following soft tissue sarcoma (STS) resection in not yet well described. Methods Patients not suitable for conventional reconstructive techniques following STS resection were considered for inclusion following the introduction of BTM to our service. Patients underwent application of BTM followed by delamination and split-thickness skin grating (STSG) at a later date. Results Six patients were included, including a range of histological subtypes and anatomical locations, and a patient who had received neo-adjuvant radiotherapy. Five out of six patients healed completely, whilst one had a small (<5mm) area of exposed bone remaining. The median time to BTM integration was 39.5 days, whilst the median time to complete STSG healing was 30.5 days. All patients had acceptable functional and cosmetic outcomes. Conclusions In conclusion, BTM is a viable tool to consider when planning the reconstruction of sarcoma defects, not just for the avoidance of free tissue transfer, but also for improved cosmesis and function over skin grafting alone.

52. Audit into Radiotherapy start times for patients with Ewing Sarcoma at the Christie proton centre

Mark Reed, The Christie NHS foundation Trust; Caroline Cleaver, Royal Manchester Childrens Hospital; Dr James Wylie, The Christie NHS foundation Trust; Dr Ed Smith The Christie NHS foundation Trust Dr Nicola Thorpe The Christie NHS foundation Trust Dr Shermaine Pan The Christie NHS foundation Trust Dr Abiola Fatimilehin The Christie NHS foundation Trust Dr Mohamed Khalid Abutaleb The Christie NHS foundatation trust.

Introduction Most non-extremity Ewing's sarcoma patients require radiotherapy (RT) as part of the local therapy, most are offered proton beam therapy (PBT). The Christie receives half of these patients for PBT from the UK and Ireland. Guidelines advise that RT should start after C10 of chemotherapy for patients having pre-operative or definitive-RT. There is some evidence that delays in starting radiotherapy impact on outcomes. Methods To audit the national service, we audited all patients with Ewing's sarcoma treated with PBT at the Christie 2018-2024 and assessed their start date with reference to guidelines. Results 146 patients were treated and 142 had sufficient data to be included. 74.6 % of patients started PBT as per protocol at the start of c10. 12.7% started at c11 and the remainder started between c5-14 We grouped delays into the follow categories: Late referral to PBT n=6 local surgical decision n=8 PBT planning n=5 Chemotherapy toxicity n=4 Patient issues n=7 Local team decision n=5 Conclusion Despite setting up a centralised national service for PBT most patients start PBT as per protocol and only 14 % of delays were due to PBT planning issues. Other reasons for delays are complex and multifactorial. However, 17% appeared to be due to late referral for PBT and 37% were delayed due to on-going discussions by the local team. 31% of delays were due to uncontrollable variables. This audit helps to highlight parts of the pathway that can perhaps be better streamlined to ensure patients start PBT as per protocol.

53. Can we streamline the Welsh Sarcoma Service from point of suspicion to first Sarcoma MDT?

Miss Sophie Mundell, Swansea Bay University

Health board; Mr Thomas Bragg, Swansea Bay University Health board

Can we streamline the South Wales Sarcoma Service from point of suspicion to first Sarcoma MDT? Aims: 1. To map the existing diagnostic pathway for sarcoma patients within NHS Wales, with particular attention to the role of histological diagnosis. 2. To evaluate the time taken from initial suspicion to the final histological diagnosis for patients with suspected sarcoma in Wales, identifying any delays or bottlenecks in the process. 3. To assess whether delays in histological diagnosis have any measurable impact on the clinical outcomes, treatment plans, or survival rates of sarcoma patients in Wales. 4. To identify and recommend potential improvements or best practices in the diagnostic pathway to shorten the histological diagnosis, drawing on examples from other regions, specialities, or systems. Method: A retrospective cohort study was undertaken of 250 randomly selected patients who were seen by the South Wales Sarcoma Service in 2023. 197 patient data sets were included in the final data analysis. Data was collected from the Welsh Laboratory Informations Systems Database and Welsh Clinical Portal Database, both providing semi-structured data, including written reports. Informal interviews were undertaken with clinicians involved in the Sarcoma Patient Care Pathway. Exclusion Criteria: 1. If presentation to service was disease recurrence. 2. If the patient did not have a surgical biopsy to confirm diagnosis. 3. If the dataset was incomplete on WLIMS/ WCP. All data was anonymised, with password limited access and held securely on SBUHB software. Conclusions: 1. 56.12% of patient cases managed in the South Wales Sarcoma Service in 2023 did not meet timeline targets. 2. Referring clinicians should be considering Sarcoma sooner, and actioning referrals to the Sarcoma service faster. 3. Histological workplace demand significantly outstrips Sarcoma Pathologist workforce, the centralisation of resources should be considered. 4. Radiological exclusion of Sarcoma as part of the 'Straight to Test' model, reduces workload burden and surgical demand on the Sarcoma Service. 5. Measuring the clinical impact on patient outcomes of diagnostic delays cannot be achieved in a measurable way utilising this dataset. Recommendations: 1. Undertake a direct service evaluation between a centralised service vs. a Hub and Spoke model, where the Welsh Sarcoma Service histological timelines can be benchmarked against other National and International peers. 2. Explore the significance of diagnostic delays on sarcoma patient mortality- , short- , medium- , and long term outcomes and how this can be reliably measured. 3. Evaluation of education need for 'first presentation' clinicians for the recognition, diagnosis and management of Sarcoma.

54. The Role of Chest X-Rays in Detecting Sarcoma Metastases: An Audit from a UK Sarcoma Centre

Mr. Stuart Mckirdy, LTHTR/RPH; Mr. Ghaith Alsaadawi, LTHTH/RPH; Marco David BokobzadelaRosa, Lancaster medical school; Nina Deacon LTHTR/RPH Lynsey Turner LTHTR/RPH George Lye LTHTR/RPH Richard Wain LTHTR/RPH

Abstract Title The Role of Chest X-Rays in Detecting Sarcoma Metastases: An Audit from a UK Sarcoma Centre Background Sarcomas are rare tumors arising from mesenchymal tissues, including bone, muscle, and fat, with a high propensity for metastasis to the lungs, liver, bones, subcutaneous tissue, and lymph nodes. In the UK, standard follow-up protocols for soft tissue sarcomas involve chest X-rays (CXR) every 3 to 6 months, depending on tumor location, to monitor for pulmonary metastasis. This audit evaluates the effectiveness of routine CXRs in identifying metastatic disease and their impact on follow-up strategies. Methods Data were collected from 125 patients treated at the Royal Preston Hospital Sarcoma Unit, of whom 42 developed metastases. Imaging and outcomes were reviewed to assess the contribution of CXRs to metastasis detection. Ethical approval was obtained for the study. Results Among 42 patients with metastases, 26 had undergone CXRs prior to diagnosis, with only 12 of these being part of routine follow-up. CXRs contributed to the diagnosis of metastases in 11 cases, with routine follow-up CXRs accounting for 5 of these (11.6% of total diagnoses). Routine follow-up CXRs detected metastases in 42% of patients undergoing this protocol, highlighting a limited but notable role. Survival outcomes showed: Patients diagnosed via routine CXRs had an average survival of 0.92 years post-diagnosis (excluding two patients still alive). Patients diagnosed via alternative methods, including symptomatic imaging, CT, PET, or biopsy, had a slightly longer average survival of 1.09 years (excluding four patients still alive). Conclusion Routine CXRs play a role in identifying pulmonary metastases in soft tissue sarcoma patients but contribute to a limited proportion of total diagnoses. Survival outcomes show minimal differences based on the method of metastasis detection, questioning the overall benefit of routine CXRs. These findings underscore the need to reassess follow-up protocols to optimize the detection and management of sarcoma metastases. Keywords Sarcoma, Metastasis, Chest X-Ray, Follow-Up Protocol, Survival Outcomes

55. Surgical limits of Limb Salvage in lower limb sarcoma excision: A Retrospective Review of Patients

Ms Kristine Joyce Cadiz BSPh, MD, MRCS, MChT Surgery,, North Bristol Trust; Ms Christie Brennan MBBS MRCS, North Bristol Trust; Ms Giulia Colavitti FRCS (Plas), North Bristol Trust; Mr Thomas Wright FRCS (Plas)- North Bristol Trust, Ms Rachel Clancy MBChB, MA, Med, FRCS (Plas)- North Bristol Trust

Introduction Treatment advancements in sarcoma have improved long-term survival outcomes, increasing focus on pushing limits of limb salvage. This study aims to define these limits using the experience of one unit's outcomes. Methods Single unit retrospective case series of three patients over 12 months with large lower limb sarcomas requiring challenging multidisciplinary and patient discussions regarding lower limb amputation versus limb preserving surgery. Results Three patients, median age 55, with high-grade lower limb sarcoma, were offered amputation or limb salvage following multidisciplinary discussions, enablement team review and extensive counselling on the benefits and disadvantages of both options. Patient with pleomorphic rhabdomyosarcoma of the lower leg posterior compartment abutting the lateral compartment underwent below-knee amputation. Six weeks postoperatively mobilises with a prosthesis. Two female patients underwent limb-preserving surgery with adjuvant radiotherapy. Mean excision specimen was 279.5 cm2. A patient with fibromyxoid sarcoma requiring resection of the anterior and medial thigh compartments underwent free-functioning latissimus dorsi reconstruction with femoral to thoracodorsal nerve transfer. Five months postoperatively, she mobilises without a leg brace and has returned to driving. A patient with spindle cell synovial sarcoma underwent posterior and lateral lower leg compartment excision with sparing of gastrocnemius and nerve sural to medial plantar nerve transfer. Three months postoperatively, she mobilises unaided. Conclusion Advancements in sarcoma treatment and limb reconstruction mean we can offer limb salvage where not previously possible. Some patients cannot accept limb loss, but salvage is only achievable through multidisciplinary and patient collaboration. Careful patient selection is paramount to ensure engagement

56. Complex Reconstruction and Neoadjuvant Strategies in Chest Wall Sarcomas: A Case Series from a Tier-II City in India

Nawaz Usman, Kasturba Medical College, Manipal; Naveena Kumar, Kasturba Medical College, Manipal

Introduction: Chest wall sarcomas are rare, aggressive tumors requiring multidisciplinary management. Reconstruction after resection poses significant challenges due to anatomical complexity and functional demands. Neoadjuvant therapies play a key role in downsizing tumors, enabling complete resection while minimizing morbidity. Methods: A retrospective review

of 14 cases of chest wall sarcomas treated at our institution between 2020 and 2024 was conducted. 5 of the cases received neoadjuvant therapy to downsize the disease. The surgical techniques utilized various reconstructive strategies, including bone cement, synthetic meshes, and autologous tissue flaps. Tumor characteristics, response to neoadjuvant therapy, and reconstruction outcomes were analyzed. Results: Neoadjuvant therapies achieved significant tumor downsizing, facilitating complete resection with negative margins. An R0 resection was achieved in all cases. Reconstruction techniques were tailored to defect size and location, ensuring structural integrity and adequate functional outcomes. Postoperative complications were minimal. Conclusion: Chest wall sarcomas are a diverse group of pathologies with various resectional and reconstructive challenges. The integration of neoadjuvant therapies with appropriate reconstructive techniques is critical in their management. This series highlights the importance of a tailored, multidisciplinary approach to optimize oncological and functional outcomes.

57. Mesenteric fibromatosis: a call to arms or one for restraint?

Nawaz Usman, Kasturba Medical College, Manipal

Introduction: Mesenteric fibromatosis (MF), although benign, is a locally aggressive tumor. The treatment of choice is surgery. However, certain locations can be challenging to treat surgically. MF tends to grow diffusely along the mesentery. One must exercise caution while attempting aggressive resections of the mesentery, lest the patient end up with unacceptable morbidity. Presentation: A 41-year male presented to the emergency department with fever, breathlessness and progressive abdominal distension. He had undergone a laparotomy, biopsy and closure of an inoperable mass in 2019. Colonoscopy done in 2019 was suggestive of multiple polyposis coli. On clinical examination, he was febrile, tachypneic. A large abdominal mass was found occupying all of the abdomen. Emergency CECT scan showed an ill-defined heterogeneously enhancing abdomino-pelvic mass lesion measuring 18 x 33 x 29cms with large air fluid level with a suspicious fistulous communication with bowel. Management: Patient was stabilized and taken up for an exploratory laparotomy. The tumor was arising diffusely from the small bowel mesentery. There was fistulous communication between the mass & the ascending colon. The tumor was excised along with the involved mesentery. Gross tumor was left behind on proximal jejunal mesentery to preserve approximately 120cm of the jejunum. The postoperative recovery was uneventful. Final histopathology was suggestive of desmoid like fibromatosis. Conclusion: The diagnosis of mesenteric fibromatosis should be considered in tumors originating from the bowel wall that diffusely infiltrate the mesentery. Treatment is a function preserving surgery even if this entails a R2 resection.

58. mandibular metastases as first presentation of metastatic leiomyosarcoma. Review of 2 cases

Parth Tagdiwala, University College London Medical School; Deepti Sinha, Head and Neck London Sarcoma Service University College London Hospital; Franel Le Grange, Head and Neck London Sarcoma Service University College London Hospital; Vasilios Karavasilis Head and Neck London Sarcoma Service University College London Hospital

Introduction Leiomyosarcoma is a malignant smooth muscle tumor, whis is often very aggressive with highly metastatic potential . Leiomyosarcoma metastases to the maxilla are extremely rare and up to now, very few cases have beenreported in the literature. Herein, we describe two novel cases of metastatic leiomyosarcoma who presented as a presumed mandibular tumor. Method The electronic patient record was reviewed retrospectively to identify patients who had histological conformation of leiomyosarcoma metastases in the maxilla. . Both patients had been referred following a histologically and clinically confirmed diagnosis of leiomyosarcoma of the maxilla. Results We identified two patients who referred to Head and Neck sarcoma service with a presumed primary maxillary tumor. Case 1 describes a 32-year-old medically fit female who had presented with a three-month history of 5cm firm swelling and pain in the left per auricular area. Case 2 describes a 51-year-old medically fit female with 5-year pack history who presented with an 18-month history of left posterior maxilla pain, palatal swelling and retromolar mass. Both patients were seen and investigated according to the suspected sarcoma pathway. Clinical examination was performed and dedicated head and neck images and a total body PET CT scan were organized. Needle biopsy was undertaken in both cases which was reviewed by a sarcoma pathologist and confirmed the diagnosis of a leiomyosarcoma. In both patients, primary tumor was likely to be in the pelvis/adnexa and they were treated with palliative chemotherapy and radiotherapy. The first patient died 44 months after initial presentation and second patient is alive 56 months after initial presentation. Conclusion Metastases in the maxilla form a leiomyosarcoma are very rare but their incidence is under presented in the literature.They are very painful areas and should be managed in the context of the metastatic disease and the expected survival. It is interesting in our cases, that they both as a presumed mandibular tumor which turned to be metastatic leiomyosarcoma and these are the only cases reported in the literature.

59. Mixed methods study evaluating teenage and young adults with cancer care in the UK: BRIGHTLIGHT_2021

Rachel Taylor, University College London Hospitals NHS Foundation Trust; Cecilia Vindrola-Padros, University College London; Elysse Bautista-Gonzalez, University College London Hospitals NHS Foundation Trust; Lorna Fern, University College London Hospitals NHS Foundation Trust On behalf of the BRIGHTLIGHT_2021 study team

Background Commissioning 'joint-care' across teenage and young adult (TYA) principal treatment centres (PTC) and regional designated hospitals (DH) was introduced to enable cancer care closer to home, while providing support through the TYA multidisciplinary team (MDT). This was not supported by evidence from the 2012_ BRIGHTLIGHT study. We aimed to evaluate cancer services in England from the perspective of TYA and healthcare professionals. Methods A survey was administered to TYA newly diagnosed with cancer, recruited from across the UK. Mixed effects models compared all-PTC, no-PTC or joint-care. Simultaneously, rapid ethnography was conducted, involving semi-structured interviews with healthcare professionals in both the PTC and DH. Data were analysed through framework analysis. Results The was no difference in quality of life, social support, illness perception, anxiety or depression according to place of care but TYA who had no-PTC contact had great perceived health status. Healthcare professional's perspectives reflected developing coordinated care with full collaboration for a shared vision. Processes for sharing information were not streamlined, so there were cases when information could not be shared between organisations. Interventions to achieve coordinated care, such as an outreach team, supported the delivery of joint-care but these were not available in every region. Conclusions While there were differences in PRO reported in the 2012_BRIGHTLIGHT cohort, this was no longer the case in the 2021 cohort. This could be explained in part by more developed collaboration and coordination of care between the DH and PTC. The commissioned model of care will require resources to be delivered safely.

60. Anatomical Location of Gastric GISTs & Mutational Status

Ramesh Bulusu, Cambridge University Hospitals; Chae Rin Im, Cambridge University Hospitals; Jenny Harrington, Cambridge University Hospitals; Helen Hatcher Sarah Prewitt Gail Horan Dochka Davidson Madeleine Larkin Han Wong

Introduction: GISTs are the most common mesenchymal tumours of the gastrointestinal

tract. Gastric GISTs account for 60-70% of the total GISTs. The most common oncogenic drivers in gastric GISTs are KIT, PDGFRA (platelet derived growth factor alpha) and SDHx (succinate dehydrogenase subtypes). Anatomical location of GISTs may be mutation dependent. We present our analysis of anatomical location of GISTs in the stomach and mutational status. Material and methods: Data from the Cambridge GIST and Paediatric, Adolescent, Wildtype and Syndromic GIST (PAWS GIST) datasets were analysed. Patient demographics, histology, mutational status and location in the stomach were extracted. The stomach regions were divided into cardia/oesophageal gastric junction (OGJ), fundus, lesser curve/midbody, greater curve/ midbody, distal body and prepyloric/antrum. Each tumour was mapped to the anatomical location in the stomach and correlated with the mutational status in KIT, PDGFRA and SDH genes. Results: KIT/PDGFRA mutant gastric GISTs N=103, SDH deficient GIST dataset N=60. 65% (67/103) were KIT mutant and 35% (36/103) had PDGFRA mutations. Cardia/OGJ and fundal GISTs (n=18) were exclusively KIT mutant. 95% (20/21) of distal body and antral/ prepyloric GISTs had PDGFRA mutations. In the SDHx dataset, 86% (52/60) of the GISTs were located in the mid/distal body and prepyloric/ antrum. Conclusions: Our results show that the mutational landscape of the gastric GISTs is related to the anatomical location within the stomach. GISTs arising from proximal stomach were most likely to have mutations in KIT gene and those from distal stomach were most likely to be either PDGFRA mutant or SDH deficient GISTs.

61. An in vitro investigation of 5-aminolevulinic acid mediated photodynamic therapy in bone sarcoma

Rebecca Maggs, Newcastle University; Marcus J. Brookes, The Newcastle upon Tyne Hospitals NHS Foundation Trust; Kenneth S. Rankin, The Newcastle upon Tyne Hospitals NHS Foundation Trust;

Introduction: Photodynamic therapy (PDT) involves treating cells with a photosensitizer and irradiation, leading to increased production of reactive oxygen species (ROS) and subsequent cell death. Complete tumour resection significantly improves outcomes in sarcoma. Treating potentially positive margins with PDT, may lead to destruction of remaining malignant cells, thus improving outcomes. Aim: To assess the efficacy of 5-aminolevulinic acid (5-ALA) as a photosensitizer in combination with red light (RL) for PDT of sarcoma cells in vitro. Methods: Three bone sarcoma cell lines underwent treatment with 5-ALA and RL or ambient light (AL). 5-ALA uptake was assessed using flow cytometry. Production of ROS was measured using CellROX Green staining and fluorescence microscopy. Cell viability was assessed using Cell Counting Kit-8 assays. Results: All cell lines showed significant 5-ALA uptake in comparison to the 0mM control ($p \leq 0.05$). Production of ROS was significantly increased in cells treated with 5-ALA and RL, compared to those treated with RL and no 5-ALA or AL ($p \leq 0.05$). Viability was significantly reduced in cells treated with 5-ALA and RL, compared to AL ($p \leq 0.05$). At 72hrs post-treatment, cell viability ranged from 6-12% in 0.5mM 5-ALA and RL treated-cells vs 90-137% in 0.5mM 5-ALA and AL treated-cells. Conclusion: 5-ALA based PDT led to the desired increased production of ROS and reduction in cell viability in all cell lines. These preliminary in vitro results warrant further study with multicellular spheroid or animal models and suggest PDT has potential to be used as an adjuvant therapy to surgical resection in sarcoma management.

62. Investigating chordoma incidence, survival and management using national cancer registry data

Reuben Hastings, UCL Cancer Institute; NHS England; Mahbubl Ahmed, UCLH; , ; Sandra J Strauss

Objective The University College London – National Disease Registration Service (NDRS) partnership is investigating chordoma management and outcomes in England using national registry data.

Methods The incidence and survival of all chordomas registered in England between 1996 and 2020 were analysed using NDRS datasets. Treatment information was available 2013-2020 and consisted of chemotherapy, surgery and radiotherapy. Results There were 1,079 primary chordomas diagnosed in England between 1996 and 2020; average 43 per year; or 54 per year between 2016 and 2020. Median age at diagnosis was 62 years (1-94). In 1996-2000 there were 0.78 (0.62—0.98) chordomas per million persons in England. There was a non-significant increase to 1.04 (0.90—1.15) by 2016-2020. Skull base was the most common primary site in younger patients but became relatively less common with age. 67% of patients had a tumour resection within 12 months of diagnosis and 42% started radical radiotherapy within 12 months of diagnosis. 26% of patients diagnosed between 2009 and 2019 were treated on the overseas Proton Beam Therapy (PBT) programme. 5-year overall survival increased from 47.5% (40.4—56.0) in 1998-2002 to 65.7% (60.2—71.6) by 2013-2017 ($p < 0.001$). Similarly, 10-year overall survival for patients diagnosed in or before 2003 was 29.7% (24.5—35.9) but for patients diagnosed 2004-2013 was 42.2% (38.3—46.4); a significant improvement ($p < 0.001$). Conclusion This analysis provides contemporary incidence and survival for chordoma, basic information on management and demonstrates significant improvement in outcome over the past 25 years. Detailed analysis of management to follow. management and outcomes in England using national registry data. Methods The incidence and survival of all chordomas registered in England between 1996 and 2020 were analysed using NDRS datasets. Treatment information was available 2013-2020 and consisted of chemotherapy, surgery and radiotherapy. Results There were 1,079 primary chordomas diagnosed in England between 1996 and 2020; average 43 per year; or 54 per year between 2016 and 2020. Median age at diagnosis was 62 years (1-94). In 1996-2000 there were 0.78 (0.62—0.98) chordomas per million persons in England. There was a non-significant increase to 1.04 (0.90—1.15) by 2016-2020. Skull base was the most common primary site in younger patients but became relatively less common with age. 67% of patients had a tumour resection within 12 months of diagnosis and 42% started radical radiotherapy within 12 months of diagnosis. 26% of patients diagnosed between 2009 and 2019 were treated on the overseas Proton Beam Therapy (PBT) programme. 5-year overall survival increased from 47.5% (40.4—56.0) in 1998-2002 to 65.7% (60.2—71.6) by 2013-2017 ($p < 0.001$). Similarly, 10-year overall survival for patients diagnosed in or before 2003 was 29.7% (24.5—35.9) but for patients diagnosed 2004-2013 was 42.2% (38.3—46.4); a significant improvement ($p < 0.001$). Conclusion This analysis provides contemporary incidence and survival for chordoma, basic information on management and demonstrates significant improvement in outcome over the past 25 years. Detailed analysis of management to follow.

63. First Contact MSK Practitioners and recognition of sarcomas: A survey

Rob Turner, Leeds Teaching Hospital NHS Trust; Debbie Artis, Leeds Teaching Hospital NHS Trust.

Background: The community prevalence of symptomatic musculoskeletal (MSK) issues is high. MSK conditions are the single biggest cause of disability burden in the UK. First Contact MSK Physiotherapists (FCPs) have been embedded in primary care since 2021, their aim being to reduce the impact on GP appointments of MSK pathology which was approximately 30% of all GP contacts. FCPs sit at the heart of MSK triage and – given the widespread migration to telemedicine within primary care – may be the first healthcare professional to meet an individual with sarcoma presenting with an MSK symptom. Aims: After delivering a sarcoma awareness session during a locality FCP Education/CPD event we sought to check wider awareness of sarcoma amongst community FCPs and explore their systems for escalation of sarcoma concern. Methods: An online survey tool was used to generate a questionnaire that was sent to a mailing-list of locality FCPs. 93% felt that they should be. Conclusion: FCPs are an important component of a suspect sarcoma

patient's route-to-diagnosis. Knowledge, access to testing and advice was variable. This needs to be acknowledged by developing training, competencies and pathways/ SOPs that meet the needs of this emergent professional group.

64. Improving the patient experience of male patients receiving radiotherapy to the proximal lower limb by using a new specially designed immobilisation device: "Ting-Sling (TS)

Rosemary Muk Ting, Royal Marsden Hospital; Helen McNair, Royal Marsden NHS Foundation Trust and Institute of Cancer Research; Shane Zaidi, Royal Marsden NHS Foundation Trust and Institute of Cancer Research; Elliott Hastings: Royal Marsden Hospital Aisha Miah: Royal Marsden NHS Foundation Trust and Institute of Cancer Research Claire Surji: Royal Marsden Hospital Mandy Humphreys: Royal Marsden Hospital Helen Taylor: Royal Marsden Hospital

Introduction: Patients receiving radiotherapy for sarcoma to the proximal lower limb often require their genitalia moved away from the treatment field. There is limited guidance on optimal positioning and immobilization.1-4 Conventional methods can be uncomfortable, unreproducible and embarrassing. This project aims to improve patient experience during radiotherapy by introducing an innovative tool, the 'Ting-Sling' (TS), designed for genitalia displacement. Method: Male adult patients were offered individual TS pouches. Feedback from both patients and radiographers was collected using a five-point Likert scale questionnaire (1 = poor, 5 = excellent), distributed over the first three days of treatment and weekly thereafter. The evaluation focused on comfort, positioning, stability, setup, reproducibility, and modesty. Descriptive feedback was collected, and any adjustments to the TS were also recorded. Results: From January to October 2023, ten patients used the TS, with seven completing the questionnaires. A total of 329 responses were collected, with 93% and 88% response rates from patients and radiographers respectively. The median score for patients' experience was 5 (range 3-5), while radiographers rated it 4.5 (range 3-5). Both patients (100%) and radiographers (88% & 93%) rated the overall experience and preservation of modesty highly, with scores ≥ 4. Conclusion: TS successfully moved genitalia away from the treatment field and was acceptable to both patients and radiographers. Following simplification, no further modifications were needed. The TS significantly enhanced the treatment experience for male sarcoma patients, preserving modesty and enhancing comfort and confidence during radiotherapy. References: 1.Sarcoma UK (2022): https://sarcoma.org.uk/policy-at-sarcoma-uk/impact-of-sarcoma-national-sarcoma-survey-2020/ 2.Cancer Research: https://www.cancerresearchuk.org/about-cancer/soft-tissue-sarcoma/about 3.Macmillan Cancer Support: https://www.macmillan.org.uk/cancer-information-and-support/treatments-and-drugs/radiotherapy-for-soft-tissue-sarcoma 4. Swinscoe J, Dickie C & Ireland R, (2018) 'Immobilization and image-guidance methods for radiation therapy *of limb extremity soft tissue sarcomas: Results of a multi-institutional survey'. doi: 10.1016/j.meddos.2017.12.003*

65. Imaging of myxoid lesions: Challenges and tips to tackle them

Ruchi Gandecha, University Hospitals Leicester; Siddharth, Thaker

Myxoid soft tissue lesions can be benign (Intramuscular myxoma), locally aggressive, or malignant (myxoid liposarcoma). They pose a challenging diagnostic dilemma from both a histopathology and radiology perspective. The objective is to identify the specific challenges related to the diagnosis of aggressive or malignant myxoid lesions radiologically, with the purpose to formulate an imaging approach to aid with early diagnosis. In this presentation we will perform a case-based review of the challenges encountered by radiologists regarding myxoid lesions and share advice and tips to potentially overcome them.

We discuss the imaging characteristics that lead to uncertainty alongside the findings that supported the diagnosis of an aggressive myxoid lesion. They can mimic cysts and appear non-aggressive due to their high water content. On Ultrasound, the gain should be optimised so that detail within an apparent cystic lesion is established, and the vascularity status of the lesion must always be established prior to dismissal of a benign lesion. These lesions have a characteristic appearance on MRI but are often asymptomatic, with evidence of full body MRI being used for identifying metastases. One of the challenges identified is that they can be a part of more aggressive tumours and can cause a diagnostic conundrum especially with myxoid liposarcoma. Therefore, MRI's purpose can extend to aiding with identifying ideal biopsy targets. It is imperative that diagnostic radiologists can optimise their ultrasound images and recognise the classic appearances of aggressive myxoid lesions on MRI. They must appreciate that myxoid liposarcomas can pose a diagnostic dilemma.

66. Long-term follow-up and late effects services for UK primary bone cancer patients: a service mapping exercise

Ruth Eldershaw, Bone Cancer Research Trust; Kathleen Kane, Bone Cancer Research Trust; Viqui Vinader, Bone Cancer Research Trust;

Introduction: Primary bone cancer (PBC) patients face long-term or late effects after intensive treatment. The Bone Cancer Research Trust (BCRT) has explored the lived experiences of the PBC community, indicating that long-term and late effects care is a significant unmet need for them. Whilst BCRT offer support, the extent and accessibility of long-term follow-up (LTFU) and late effects service provision within the UK health service remains unclear. Aims: This mapping exercise will provide an overview of the LTFU and late effects services for PBC patients across the UK, supporting BCRT's goal that by 2032, more patients survive and thrive beyond their diagnosis and treatment1. University of Bath Research Ethics Committee and Health Research Authority approvals have been sought. Methods: An online survey will be distributed to appropriate representatives across UK cancer services, gathering information to map and define LTFU and late effects services. Preliminary survey findings will be presented. A Long-term and Late Effects Working Group ensures that the voices and perspectives of the PBC community, and healthcare professionals, shape this research. This group continues to be involved in the research management, guiding how and where the results are shared, ensuring that the directory of services reaches and meets the needs of the PBC community, healthcare professionals, and wider stakeholders. Future work: This exercise will inform and shape a UK-wide consultation with the PBC community, exploring patient and families' lived experiences of LTFU, building a picture of the survivorship experience and long-term supportive needs across differing contexts of service provision. References: (1) (1) Bone Cancer Research Trust. More Patients Surviving. More Patients Thriving. Our 2022-2032 Strategy;2022

67. Comparative accuracy of core-needle and open biopsy in diagnosis, subtyping, and grading of head and neck bone and soft tissue sarcomas.

S Golnaz Sadeghian B, University College London Hospital NHS Foundation Trust; , ; Deepti Sinha, University College London Hospital NHS Foundation Trust;

Introduction Head and neck sarcomas are rare and diverse tumours, studies on which are limited in the published literature. Choosing a precise biopsy technique is of paramount importance for accurate diagnosis and subsequent optimal therapeutic decisions. In this study, the aim is to compare the accuracy of two commonly used techniques in histological diagnosis, subtyping, and grading. Methods In this retrospective study, sarcoma cases discussed at Head and Neck MDT meetings between January 2018 and April 2024 were reviewed. Inclusion criteria were cases performed with either core needle or open

biopsy, with the availability of both diagnostic and final histopathology reports. Results 90 cases were included in the study. The accuracy of open biopsy in determining tumour diagnosis, histological type and subtype were: 95%, 90%, and 85%, respectively. There was no statistically significant difference to core needle biopsy with respective results of 86%, 76 % and 76%. However, the open biopsy was significantly superior to the core needle biopsy in terms of tumour grading (87% vs 62%). No significant difference between soft tissue and bone sarcoma was detected in diagnostic Discussion. This study demonstrated slightly higher accuracy in OB, notably for tumor grading (p=0.007). While OB may be preferable for bone sarcoma due to sampling challenges, CNB is a feasible, less invasive first line option for soft tissue sarcomas. Biopsy tract excision or targeted radiotherapy is recommended to minimise tumor cell seeding risks. Optimal sample quality and second opinion histopathology further improve diagnostic reliability. Conclusion Core needle biopsy is an accurate, minimally invasive and safe diagnostic modality in head and neck sarcoma. The authors of this study recommend a non-inferiority trial to definitively establish this in comparison to open biopsy.

68. The role of NGS application in the diagnosis and treatment of Head and Neck sarcoma cases

S Golnaz Sadeghian B, University College London Hospital NHS Foundation Trust; , ; Deepti Sinha, University College London Hospital NHS Foundation Trust;

Introduction: 40% of sarcomas are misdiagnosed. NGS may provide more accurate diagnosis and hence better treatment. The study aims to provide the first results of a dedicated head and neck sarcoma multidisciplinary team regarding utilizing NGS in the diagnosis and treatment. Method: Between January 2023 and April 2024, patients with a histologically verified head and neck sarcoma, who had NGS, were included in the study. Demographic data, anatomic site, morphology data, multidisciplinary team recommendation, details of treatment, and their outcomes were obtained from electronic patient records and analysed retrospectively. Prior to 2023, NGS hasn't been requested for head and neck sarcoma cases. Result: Among 162 cases of verified head and neck sarcomas,12 patients were included in the study, with a mean age of 36 years. These cases have been diagnosed with ultra-rare sarcoma types. The NGS panels include RNA fusion and RMH200 DNA. Oncogenic variants were found in 4 cases and RNA fusions were detected in 4 cases. The reports of NGS have helped with the diagnosis in 4 cases and potentially advised on the type of chemotherapy treatment by excluding NTRK rearrangement in most cases; however, the overall MDT approaches or surgical strategies have not been affected by the NGS report, and in some cases the reports received after starting the treatment. Conclusion: While NGS can alter systemic treatment, it does not change surgical management. The small number of head and neck sarcoma cases and tumour heterogeneity in a complex anatomical area warrants NGS on every case would help better define this subset of the population and ultimately may lead to a *better outcome.*

69. Functional Bipolar Latissimus Dorsi Bicep Reconstruction Following Sarcoma Resection in the Elderly

Samantha Leong, Southmead Hospital, Bristol; Harry Whitehouse, Southmead Hospital, Bristol; Michael Rice, Southmead Hospital, Bristol; Thomas Wright, Southmead Hospital. Rachel Clancy, Southmead Hospital. Giulia Colavitti, Southmead Hospital.

The aim of this project was to evaluate the effectiveness of functional biceps reconstruction in the elderly or frail patient population. A retrospective review of a prospectively maintained sarcoma database and functional outcome testing, using the DASH and MSTS, was performed. Results 4 patients aged 60-84 (median 71) successfully underwent a sarcoma resection of the anterior compartment of their upper arm and functional bipolar Latissimus dorsi (LD) transfer. All patients had high grade sarcomas in their biceps, with three having biceps and brachialis excised and the other having biceps, brachialis and coracobrachialis excised. The musculocutaneous nerve was resected in all patients. The bipolar LD was performed with the cranial end secured with a bone anchor to the coracoid and the caudal end weaved into the distal biceps stump. All patients received pre-operative core and shoulder strengthening with a sarcoma physiotherapist. Following six weeks of immobilisation, they commenced a graduated strengthening programme. All patients regained useful active elbow flexion (MRC grade III) at 3 months. Functional outcomes for the elderly cohort were equivalent to other studies with younger patients. Conclusions Elderly or frail patients with significant medical comorbidities can regain useful active elbow flexion following functional biceps reconstruction. This is essential in preserving their independence and dignity.

70. Advancing Bone Cancer Advocacy: Insights from the Bone Cancer Research Trust's Awareness Survey

Silvia Kraft, Bone Cancer Research Trust

Introduction: In 2022 the Bone Cancer Research Trust (BCRT) Launched a 10-year strategy outlining ambitious objectives across our three pillars of Research, Awareness, and Support & Information. These aims were set in consultation with stakeholders within the primary bone cancer community to address issues most important to them. Within the development of BCRT's Research Strategy, awareness was uncovered as a top priority. This includes work around the prolonged path to diagnosis, late and long-term effects, and gaps in access to care. Aims and objectives: In line with evidence from the charity's 2020 Patient Survey, opportunities were identified to deepen existing awareness activities and introduce a policy and advocacy function. As the first point of action, the newly appointed Policy and Awareness Officer produced an Awareness Survey to gather insights directly from the community. Questioned focused on understanding preferences for receiving information about BCRT's awareness initiatives, identifying which healthcare professionals should be prioritised for targeted education, and determining topics most valued by the community. The electronic survey opened during Bone Cancer Awareness Week (October 7th – October 13th) and collected responses until November 1st. Submissions were accepted from patients, family members, researchers, healthcare professionals, and any supporter of BCRT. Consultation and next steps: The charity's Patient and Public Involvement Panel (PPIP) was consulted as an information focus group discussion following the initial interpretation of the results. The discussion allowed for further clarity of stakeholder perspectives. This also enabled the development of more strategic activities in areas of policy and awareness.

71. Bridging the Knowledge Gap in Sarcoma: An overview of the National Sarcoma Awareness Project's impact on Medical Education

Silvia Kraft, Bone Cancer Research Trust; Zoe Davison, Bone Cancer Research Trust; Professor Tom Cosker, Oxford University Hospitals NHS Foundation Trust; Mr Ather Siddiqui - Oxford University Hospitals NHS Foundation Trust Corey Chan - Newcastle Upon Tyne Hospitals NHS Foundation Trust Ms Heledd Havard - Royal National Orthopaedic Hospital, London Mr David Boddie - NHS Grampain

*I*ntroduction: The National Sarcoma Awareness Project (NSAP) is a joint-funded annual competition aimed at educating medical students and resident doctors about sarcoma. Both Bone Cancer Research Trust and Sarcoma UK hear from patients and families about the delayed path to diagnosis, bouncing between healthcare professionals and resulting in late presentations. Participants undertake several e-learning modules, and then complete a questionnaire to test their knowledge Top scorers are awarded a funded short-term

fellowship to a sarcoma centre. Identifying the need: Medical Students receive limited information on sarcoma during their degree and may never come across the disease in their career. This indicates that future doctors may not have a confident understanding of the red flag symptoms and referral pathways. This also highlights the gap in young doctors who choose to specialise in this area of oncology. Project aims: Continue to expand NSAP to promote awareness and education to doctors/ trainees/AHPs Engage with RCGP to provide regular structured training to GP trainees Engage with AHPs (especially physiotherapists) to widen awareness at multiple points of contact. Impact and next steps: Over the past decade, over 2,300 students and doctors have participated in the educational project with 48 funded fellowships provided to highly scoring individuals and completed successfully. With ambitions to revamp the programme in the coming years, this evaluation showcases areas for improvement and ambitions for innovation. An in-depth analysis of applicants supplemented by qualitative evidence suggests how both charities and the NSAP committee can generate a greater impact across the medical sector.

72. Metastatic Spindle Cell Sarcoma of the Prostate: A Rare Case of Long-Term Survival

Sindhu Retnabai, The Christie Hospital NHS Trust; Dr Rao, The Christie Hospital NHS Trust; , ; Dr Sindhu Retnabai The Christie Hospital NHS Trust Dr Rao The Christie Hospital NHS Trust

Introduction Spindle cell sarcoma of the prostate is an extremely rare and aggressive tumour with a high likelihood of distant metastasis. Average life expectancy for metastatic disease is less than one year. Chemotherapy and radiotherapy often fail to produce curative effects due to the tumour's poor differentiation. Here, we present a remarkable case of long-term survival in a patient who defied these odds. Case Presentation A 28-year-old man presented to locally with lower rectal pain lasting three weeks. Initially treated for a suspected prostate abscess, further investigations revealed metastatic malignancy. Investigations Bloods within normal range. Biopsy of prostatic tissue confirmed spindle cell sarcoma. Imaging revealed pulmonary metastases and pelvic lymphadenopathy. Bone scans and bone marrow normal. Treatment The patient underwent combination chemotherapy with Vincristine, Adriamycin, Actinomycin, and Cyclophosphamide, and prostate radiotherapy. During chemotherapy, metastatic lesion was detected in the brain, prompting palliative brain radiotherapy. The patient was given an estimated survival of six months and was started on oral etoposide for palliation. Remarkably, he remained well on etoposide for 2.5 years. Follow-Up Care The patient was initially followed for disease progression, with *visits becoming less frequent as he was stable. Post-treatment side effects were managed with neurologist and endocrinologist support. He underwent hip replacement surgery due to steroid and radiotherapy induced avascular necrosis. Conclusion Rare case of long-term survival after palliative treatment with single agent oral Etoposide. Late effects compromising QoL evolve over many years needing multidisciplinary support. Patient continues to attend LE clinic after 28 years post initial diagnosis.*

73. Effectiveness of abductor mechanism repair using GT washer in proximal femur replacements with Endoprosthesis reconstruction

Tareq Altell, Glasgow Royal Infirmary; Waleed Ahsan, Glasgow Royal Infirmary; Ewan Fraser, Glasgow Royal Infirmary; Sanjay Gupta (Glasgow Royal Infirmary), Ashish Mahendra (Glasgow Royal Infirmary).

Background: Proximal femur replacement (PFR) following oncological resections necessitates the reconstruction of the abductor mechanism, particularly through the reattachment of the greater trochanter (GT) to the endoprosthesis. This study aim is to assess radiological failure rates associated with the use of GT washer in Zimmer® Segmental System to achieve GT reattachment to the endoprosthesis. Methods: A retrospective review was conducted on patient records from 2010 to 2023 from our regional tumour unit in the West of Scotland. Included were patients who underwent PFR for malignancies and had GT reattachment using the GT washer in Zimmer® Segmental System. Patient data from electronic health records and the national PACS system were analysed to assess the radiological outcomes. Results: The cohort comprised 23 patients, with ages ranging from 33 to 81 years (average 60.5 years) and follow-up periods spanning from 1.8 to 107.8 months (average 30.2 months). The interval between the last x-ray and the operation ranged from 3 to 66 months (average 20 months). Radiological evaluation showed a 0% failure rate of GT reattachment at the time of the last AP x-ray and/or outpatient visit. Conclusion: Various methods are available for GT reinsertion into the endoprosthesis, including washers, cables, and direct suturing. Our findings suggest that GT washers in the Zimmer system provide effective GT stabilization without migration, maintaining the integrity of the hip's abductor musculature. Further comparative studies are necessary to determine the functional outcomes and advantages of each technique to enhance recovery and mobility in PFR patients.

74. OxPOS economic models of sarcoma care: a systematic review and avenues for future research

Teodoro D'Agostino, Nuffield Department of Primary Care Health Sciences, University of Oxford; Zython Lachica, Nuffield Department of Primary Care Health Sciences, University of Oxford; Andrew B Hassan, Sir William Dunn School of Pathology, University of Oxford; Apostolos Tsiachristas University of Oxford

As a heterogeneous group of rare cancers, sarcoma has received limited attention in health economics research. We have performed a systematic review that maps the economic models developed for evaluating interventions in patients with sarcoma. Following PRISMA guidelines, we searched EMBASE, PubMed, CRD, and Google Scholar for economic evaluations of sarcoma-related interventions meeting predefined criteria. Data on study design, patient characteristics, and information sources were extracted using a standardised template, and study quality was assessed using the CHEERS checklist. Out of 193 search results, 21 studies met the inclusion criteria. These models predominantly focus on specific sarcoma subtypes, with soft-tissue sarcoma being the most studied (n = 15, 71%). Chemotherapy was the most frequently evaluated intervention (n = 13, 62%). Markov models were the most common analysis approach (n = 7, 33%), followed by decision trees (n = 5, 24%) and partitioned survival analyses (n = 4, 19%). Six studies (29%) were observational, and four (19%) utilised data from the PALETTE clinical trial, while the rest relied on other trials and meta-analyses. Overall, the methodological quality of the studies was moderate, and the scope of existing models remains narrow, with limited consideration of broader care pathways or diverse patient populations. Future research should prioritize the development of comprehensive, whole-pathway models capable of addressing emerging areas such as precision oncology and complex interventions, as well as approaches tailored to the heterogeneity of sarcoma patients.

75. Atypical fibrous histiocytoma and rare metastatic malignant transformation

Tuba Khan, Lancashire Teaching Hospitals NHS Foundation Trust; Ghaith Alsaadawi, Lancashire Teaching Hospitals NHS Foundation Trust; Stuart McKirdy, Lancashire Teaching Hospitals NHS Foundation Trust; George Lye, Lancashire Teaching Hospitals NHS Foundation Trust

Introduction Atypical fibrous histiocytoma is rare variant of dermatofibroma. It is pathologically delineated by a proliferation of spindle fibroblastic cells with admixed atypical cells, centered in the dermis and set in a collagenous stroma Regardless of the atypia, these neoplasms mainly follow a benign clinical course. Instances of recurrences and metastases are rare where a complete excision

has been performed. However, in malignant fibrous histiocytoma, despite a 3–5 cm excision margin, local recurrence and/or metastasis occur in 40–50% cases, mostly within 2 years. Methods In this case report series, we discussed two cases of atypical fibrous histiocytoma who presented to the soft tissue clinic at Chorley Hospital, UK. Results Case 1: A 26-year-old fit and well male presented with two-month history of a progressively enlarging lump in the right groin. Initially he underwent excision biopsy of a lesion from the right thigh under the care of the vascular surgeons as this was thought to be a vascular lesion at the time. However, histology reported this as incompletely excised fibrous histiocytoma. This was monitored for a period of five years before undergoing malignant transformation. The patient developed constitutional symptoms of weight loss, lethargy and night sweats. On assessment in clinic, he had a large palpable soft tissue mass in the right groin. MRI revealed a 6 x 5.5 cm heterogenous lesion in the right growing compressing the underlying femoral vessels with smaller satellite nodules, aggressive looking high-grade lesion. Staging CT scan reported no metastatic disease. The patient underwent a right groin dissection and sartorial muscle switch. Histology from this again confirmed metastatic atypical cellular fibrous histiocytoma with three positive lymph nodes. Case 2: A 44-year-old male presented with an 8-year history of a progressive swelling to the right lower knee with overlying skin pigmentation with no previous history of trauma. MRI scan showed superficial encapsulated lesion on the medial side of the tibial plateau with the deep surface extending to within approximately 2 mm of the MCL and cortex. This measures approximately 36 mm longitude, 33 mm AP and up to 25 mm in depth there is intense enhancement following gadolinium with a small focus of non-enhancing tissue inferiorly and posterior measuring approximately 6 mm and multiple vascular channels. The pathology from the excision biopsy showed the neoplasm is composed of short whorls of plant spindle cells with vesicular, ovoid nuclei and small to indistinct nucleoli. The neoplasm reaches the 12 o'clock margin and is less than 1 mm from the deep margin. Due to the incomplete deep margins, specialist regional sarcoma skin MDT recommended further re-excision. Conclusion Atypical fibrous histiocytoma is a rare distinctive diagnosis which requires meticulous pathological examination and immunohistochemical testing. Recognition is key to facilitate appropriate surgical treatment. Clear surgical margins are warranted in even benign pathology. Despite malignant transformation being rare, once it occurs, this cancer is very aggressive and can be a challenge to treat.

76. Bone Cancer Research Trust - Review of the Support Service

Vina Dahya, Bone Cancer Research Trust; Vina Dahya, Bone Cancer Research Trust; Zoe Davison, Bone Cancer Research Trust; Ruby Campbell

The Bone Cancer Research Trust (BCRT) Support Service is an inclusive service dedicated to assisting individuals impacted by primary bone cancer and tumours. Established in 2019 from a patient survey, the support service aims to meet the unique and complex needs of patients, their families, and caregivers, by offering financial assistance, peer support groups, and access to informational resources. To ensure the service remains relevant, accessible, and impactful, BCRT is undertaking a detailed review in partnership with Good Innovation. This evaluation seeks to assess the service's current effectiveness in meeting the needs of the bone cancer community, identify areas for improvement, and uncover any unmet needs that may have arisen as treatment pathways and patient demographics evolve. The review process involved gathering feedback from patients, family members, and healthcare professionals through interviews and surveys. Key areas of focus include the accessibility and timeliness of support, the relevance of resources offered, and the role of peer support in patient well-being. Preliminary findings suggest that while the service is highly valued, specific adjustments may enhance its reach and efficacy. Recommendations from this review will shape the next phase of BCRT's Support Service, Recommendations from this review will shape the next phase of BCRT's Support Service, aligning it closely with the expectations and challenges faced by the community. The outcome of this review aims to reinforce BCRT's commitment to providing a holistic, patient-centred support network that adapts to changing needs and continues to offer impactful resources for those navigating primary bone cancer and its long-term effects.

Note Paper

Note Paper

decīphera®

A member of ONO Pharma

Deciphera Symposium at the British Sarcoma Group (BSG) Annual Conference 2025

This is a promotional symposium organised and sponsored by Deciphera Pharmaceuticals and is intended for healthcare professionals only.

BSG UK GIST Guidelines: considerations and implications in clinical practice

FACULTY

Professor Robin Jones
Group Leader in Sarcoma Clinical Trials at The Institute of Cancer Research and Consultant Medical Oncologist. The Royal Marsden, London, UK.

Mr Max Almond
Consultant in General Surgery, Surgical Oncology, Pancreaticobiliary and Upper Gastrointestinal Surgery. Lead for Clinical Governance in Emergency General Surgery. Birmingham University Hospitals, Birmingham, UK.

Thursday 6th March 11:00–11:20 Gateshead Suite
Opening and introduction
Presentation: *Overview of 2024 Guidelines*
Expert Perspective: *Implementation*
Q&A and closing remarks

To discover more, please visit us at the Deciphera stand

Adverse events should be reported. Reporting forms and information can be found at https://yellowcard.mhra.gov.uk/ Adverse events should also be reported to Deciphera on +448082 580026 or medicalinformation@deciphera.com

GIST=gastrointestinal stromal tumour; UK=United Kingdom.

This is a promotional symposium organised and sponsored by Deciphera Pharmaceuticals and is intended for healthcare professionals only.

This flyer has been written and sponsored by Deciphera.

It is intended for healthcare professionals only.

DCPH-P01986| February 2025

Scan the QR code for prescribing information