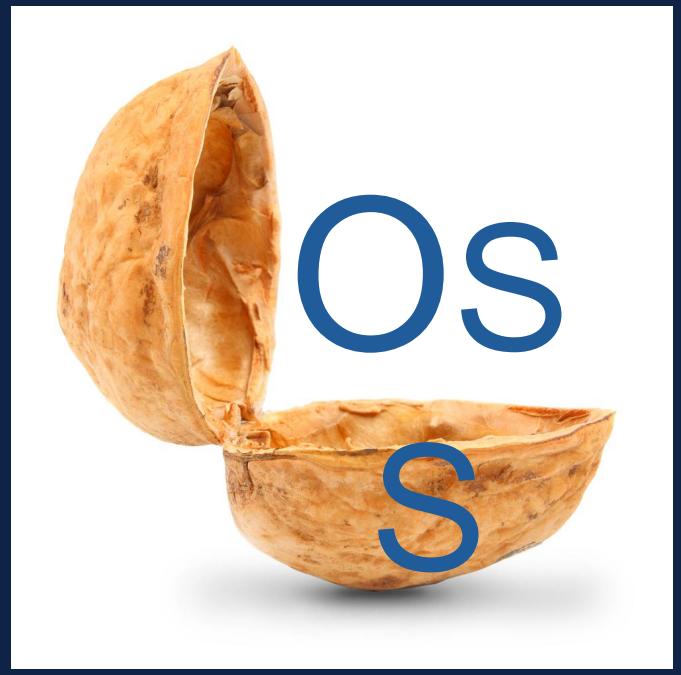
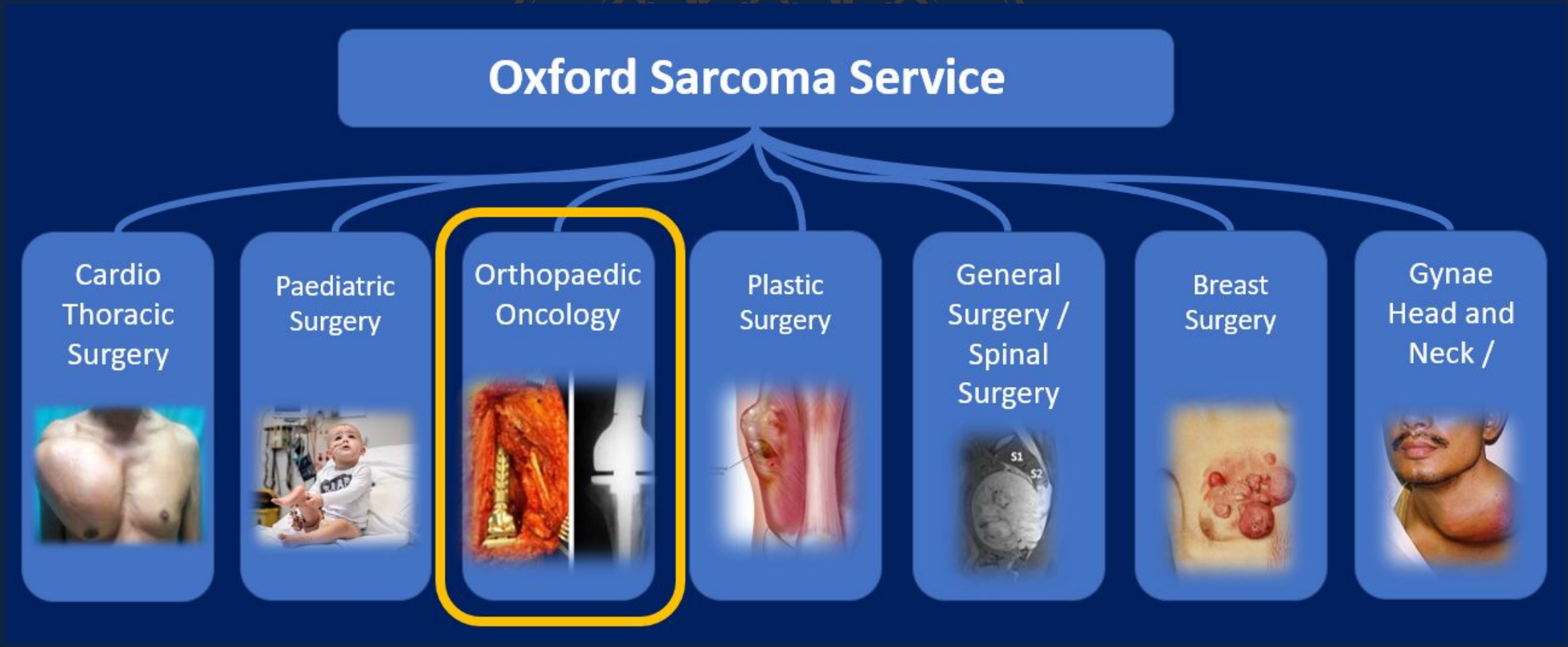


The Oxford Sarcoma Service in a nutshell

M Ather Siddiqi – FRCS, FRCS (T&O)
Consultant Sarcoma and Arthroplasty
Nuffield Orthopaedic Centre
OXFORD UNIVERSITY HOSPITALS

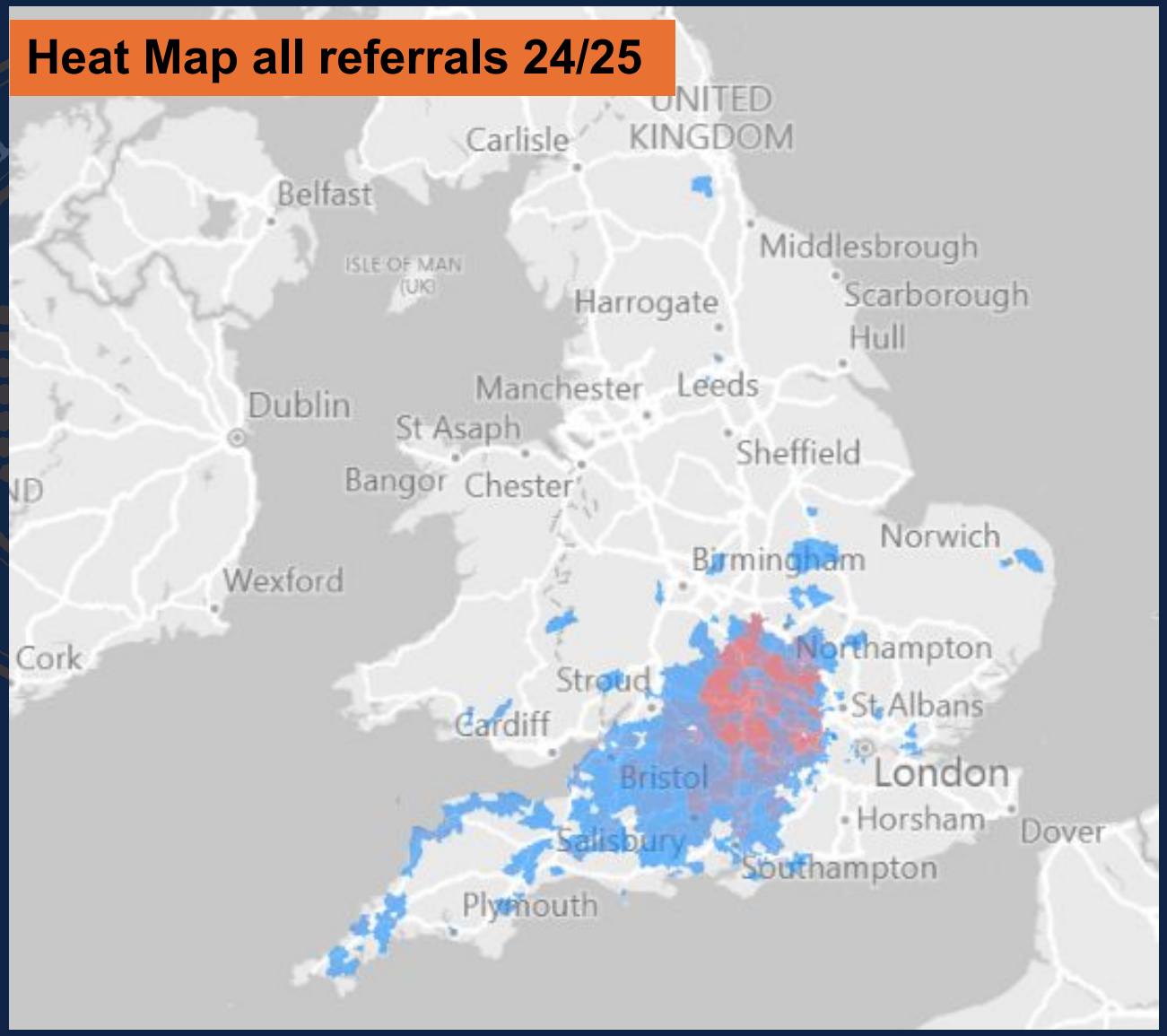
OSS is one of the few national sarcoma services to comprehensively cover Head to Toe Sarcoma



OSS provides care for 12M patients across the South and South-West

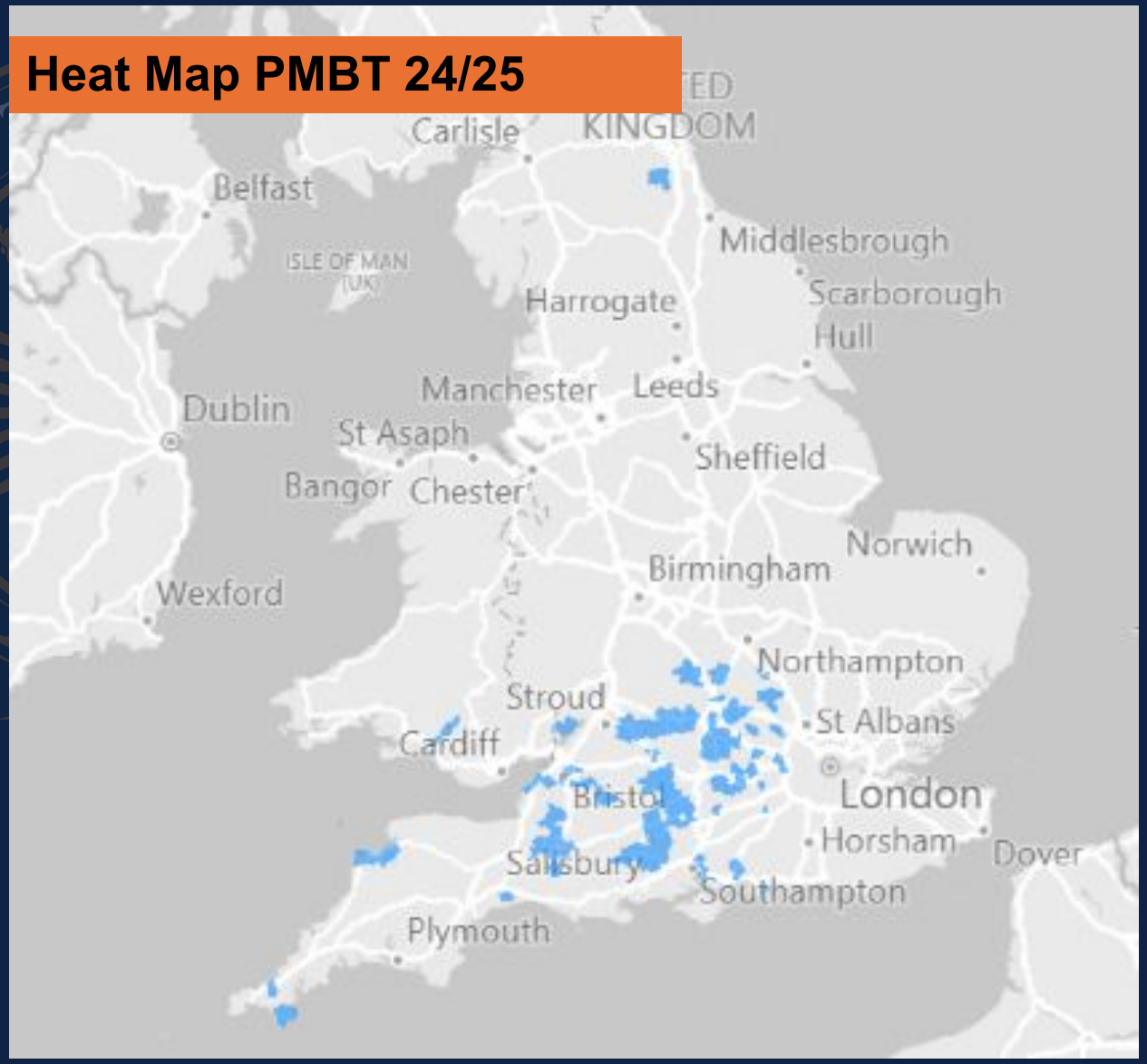
April 2024 to September 2025 - **2,664** GP/Tertiary Referrals

Avg ~ **40** **New referrals p/week**



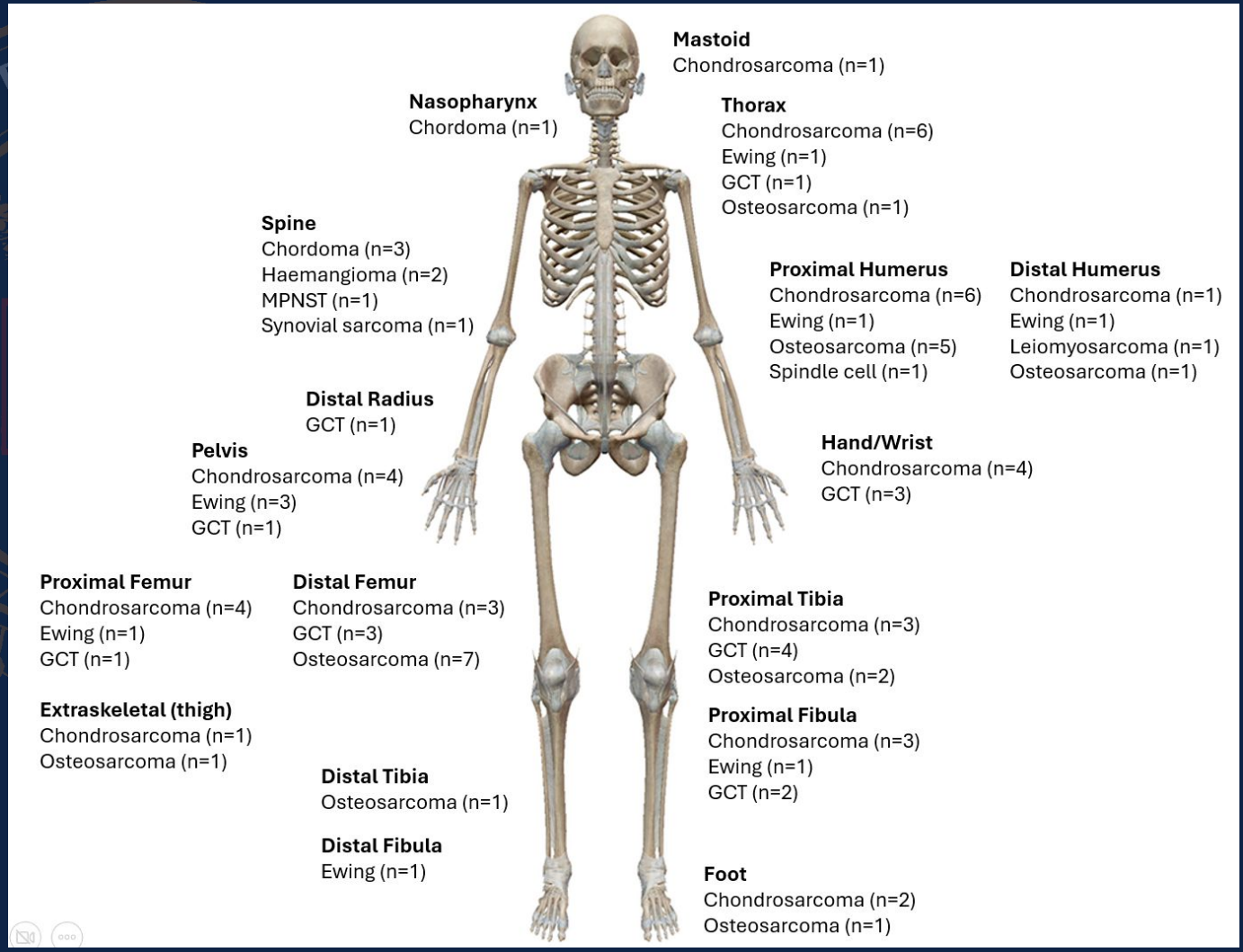
OSS as a designated PMBT Service

October 2024-2025
Suspected PMBT Referrals - 192
Confirmed PMBT - **99**

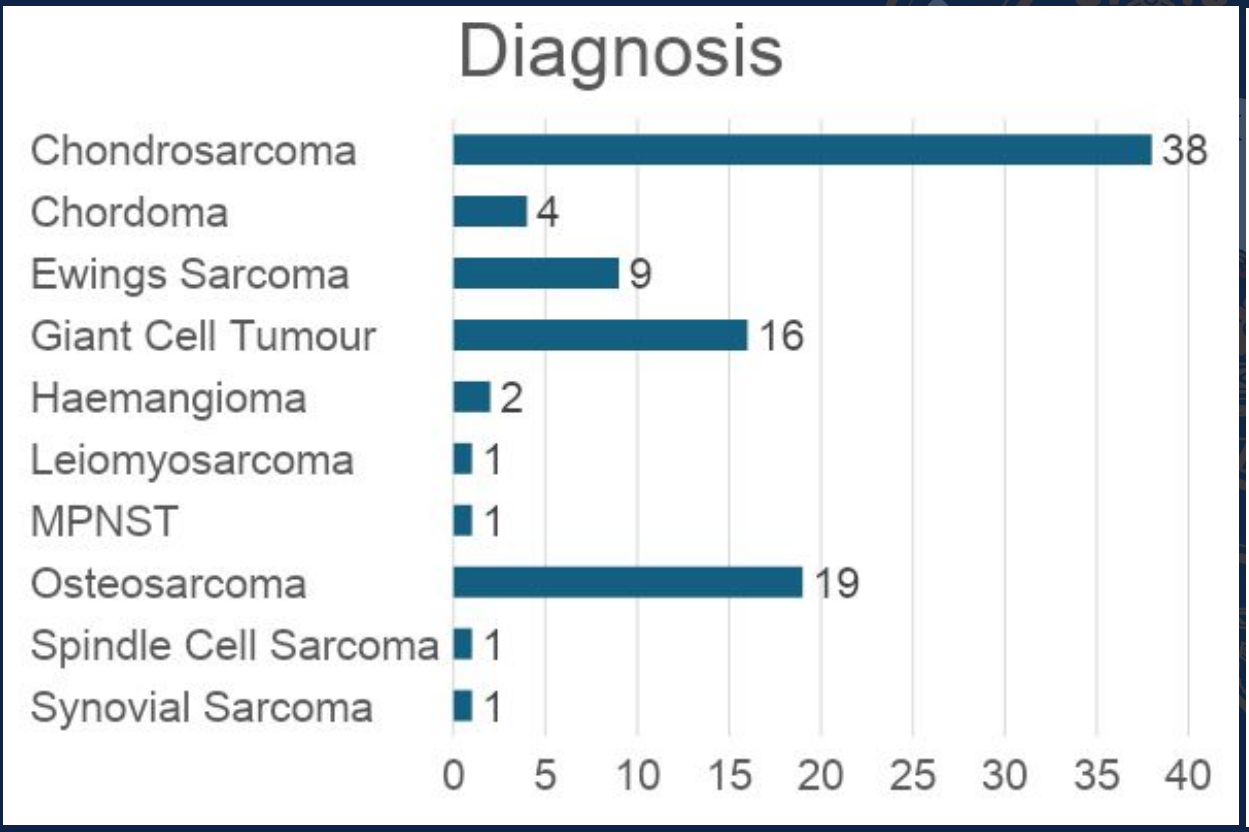


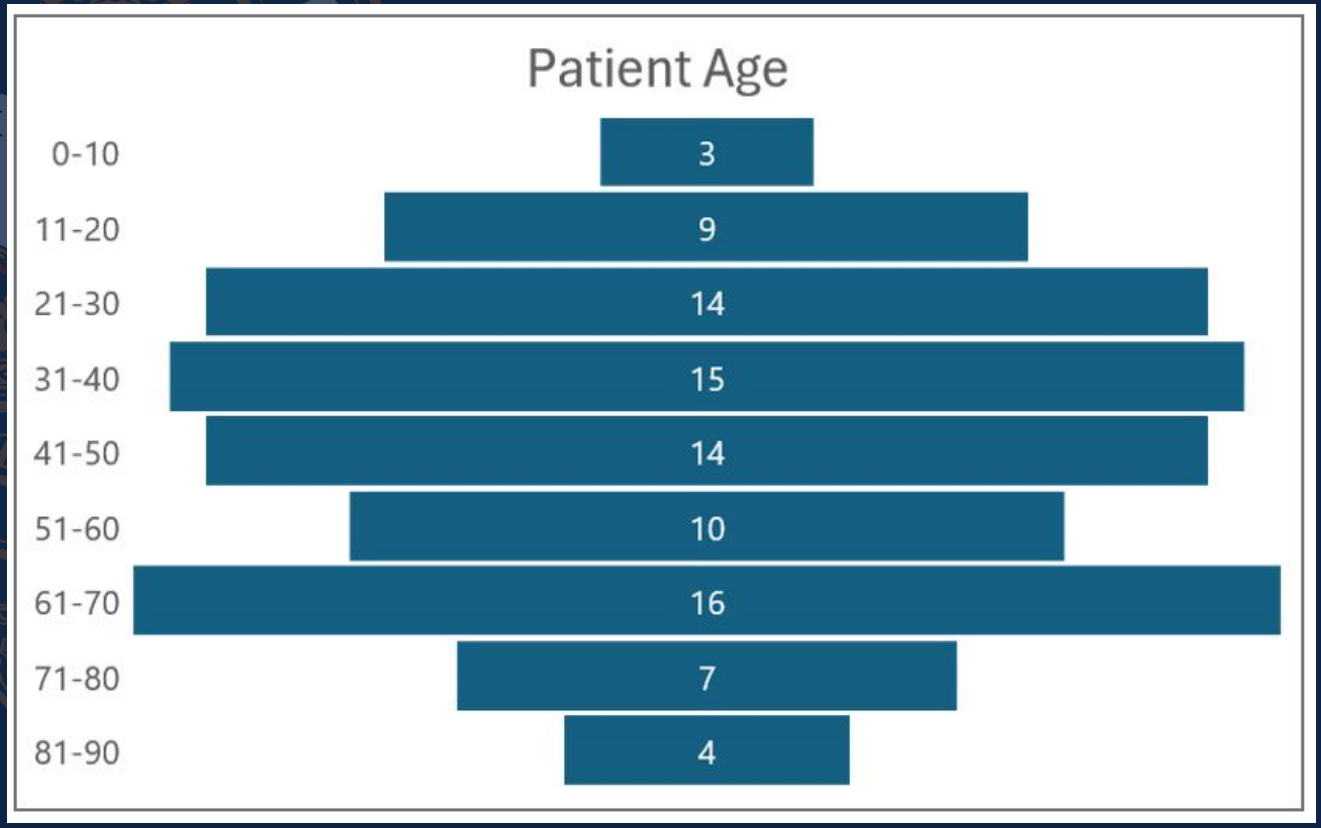
OSS as a designated PMBT Service

Truly Head to Toe Service



OSS treated 92 PMBTs in 2023/4





Oxford Sarcoma

Oxford Sarcoma






ORTHOPAEDIC SARCOMA

PAEDIATRIC SARCOMA



PLASTICS SARCOMA

SPINE SARCOMA



THORACIC SARCOMA


RETROPERITONEAL SARCOMA

MAX-FAX / HEAD AND NECK SARCOMA



SARCOMA ONCOLOGY

PAEDIATRIC/TYA ONCOLOGY

PAEDIATRIC/TYA SUPPORT WORKER

Oxford Sarcoma



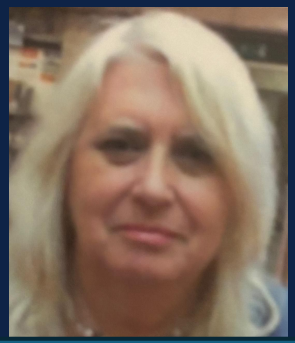

SARCOMA RADIOLOGY


SARCOMA PATHOLOGY




SARCOMA CNS


OCCUPATIONAL THERAPY AND PHYSIOTHERAPIST



MDT COORDINATOR

OSS MDT – Every Monday

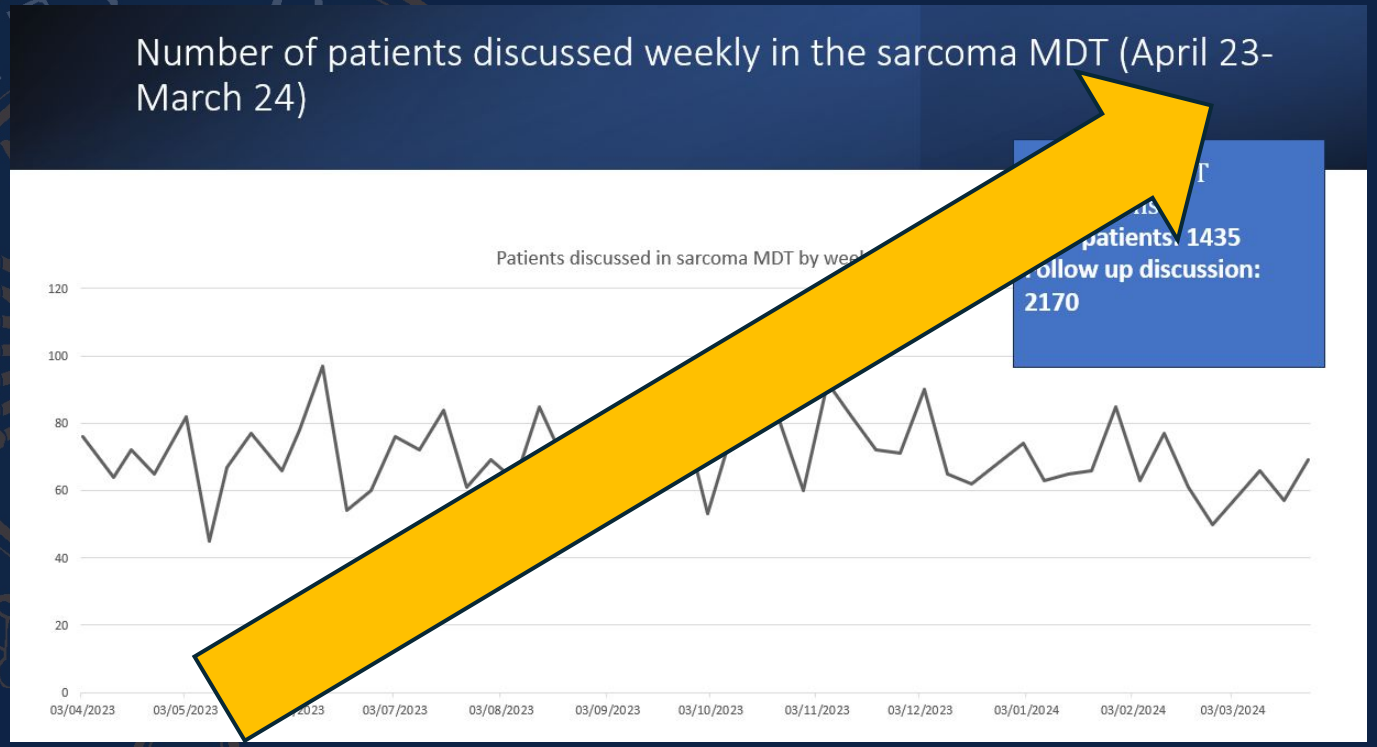
Core MDT

- 6 Orthopaedic Oncologists
- 5 Plastic Surgeons
- 3 Sarcoma Oncologists
- 2 Histopathologists
- 1 Spinal Surgeon
- 1 General Surgeon - RPS
- 1 Urologist - RPS
- 3 Thoracic Surgeon
- 5 MS Radiologists
- 1 Chest/PET CT Radiologist

- 2 Paediatric Oncologists
- 2 Paediatric Orthopaedic Surgeons

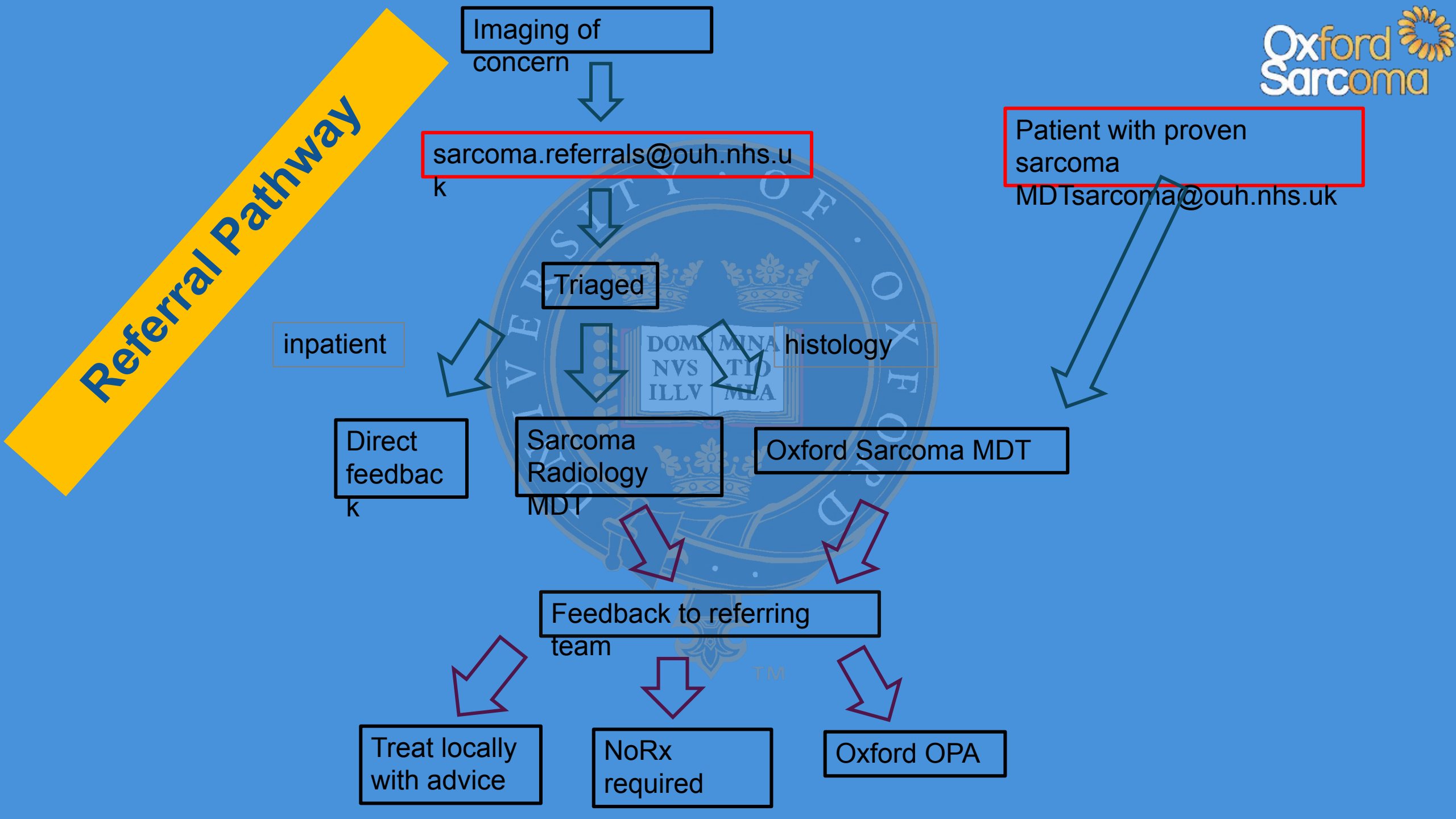
TYA:Teenage and Young adult(16-24yrs)

- Cancer + Data Manager
- 2 Cancer Nurse Specialists
- MDT Coordinator



3550 Discussions in MDT Sep 2024 - 2025

Referral Pathway



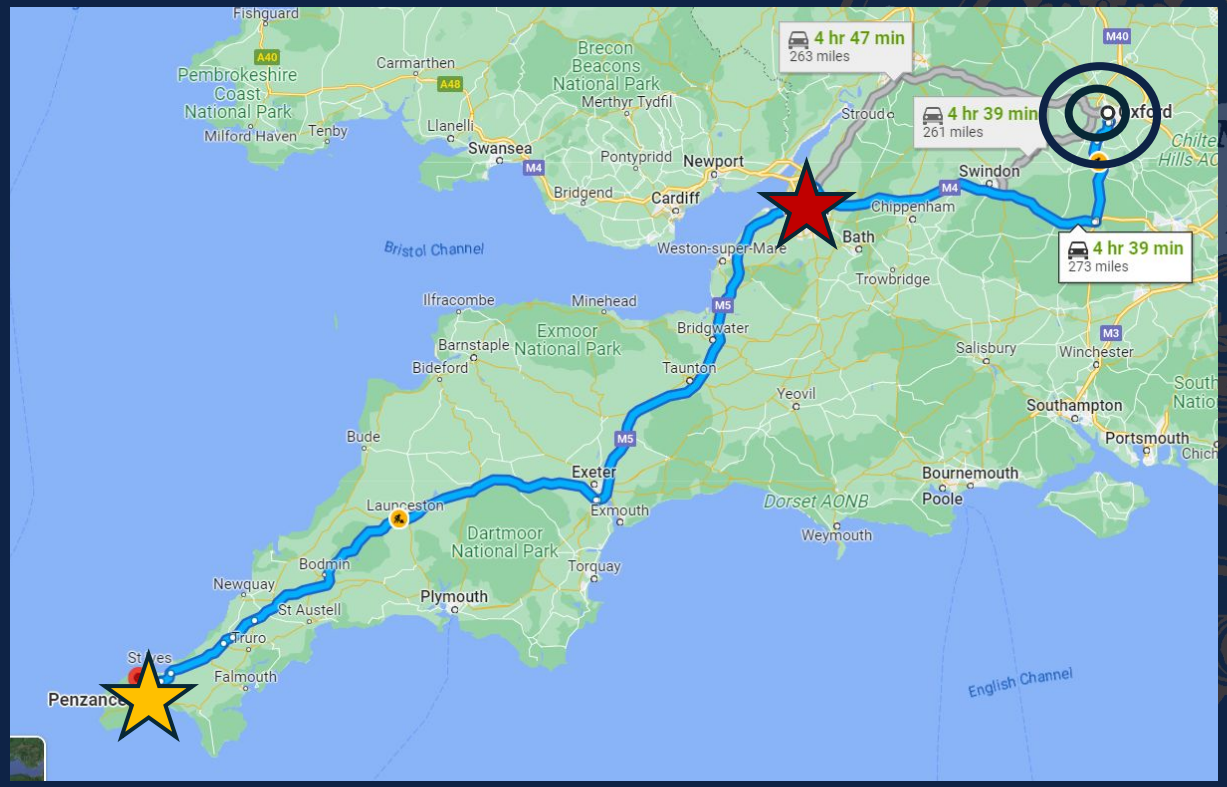
Recent patient satisfaction survey reports excellence

Recent patient listening event

The Service works hard to maintain its relationship with its referrers

OSS is Sensitive to Health Inequalities

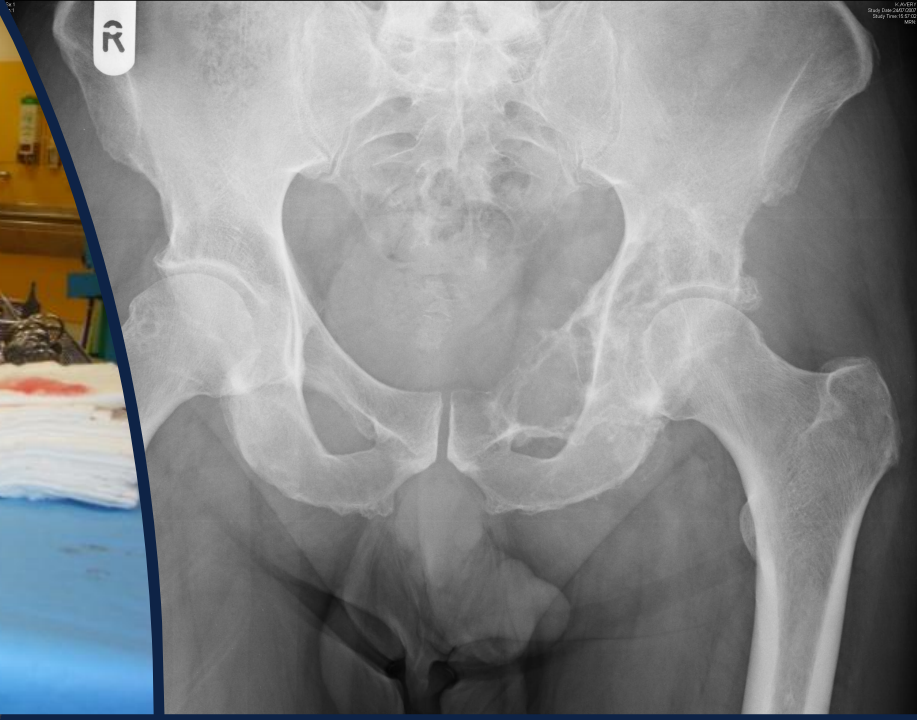
Variation in Access, Outcomes and Experience of different patient groups

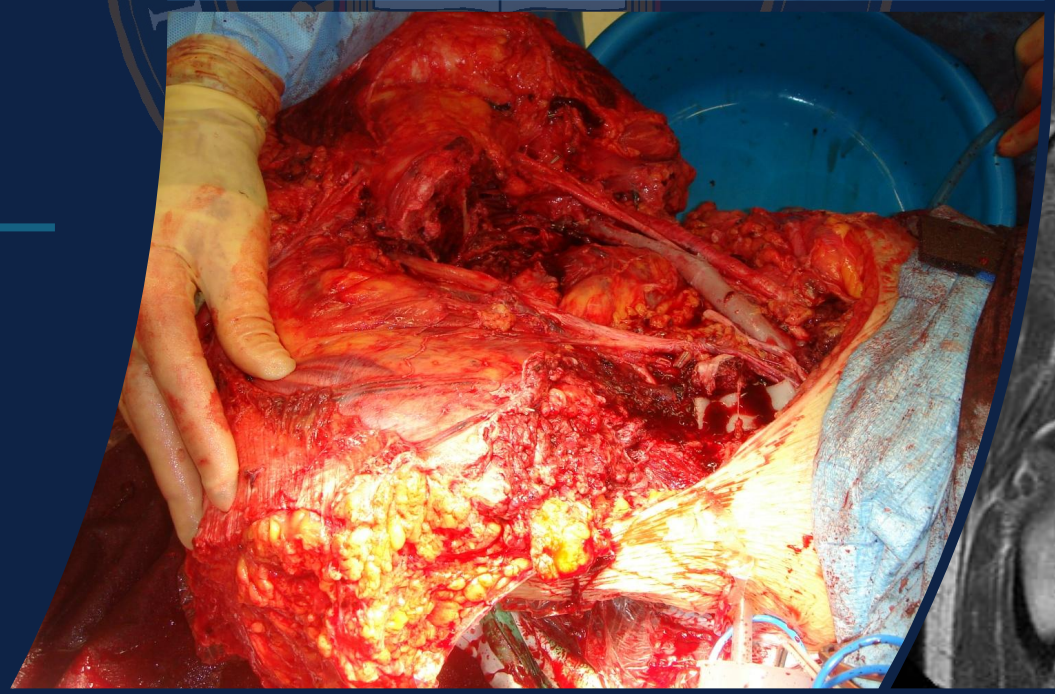


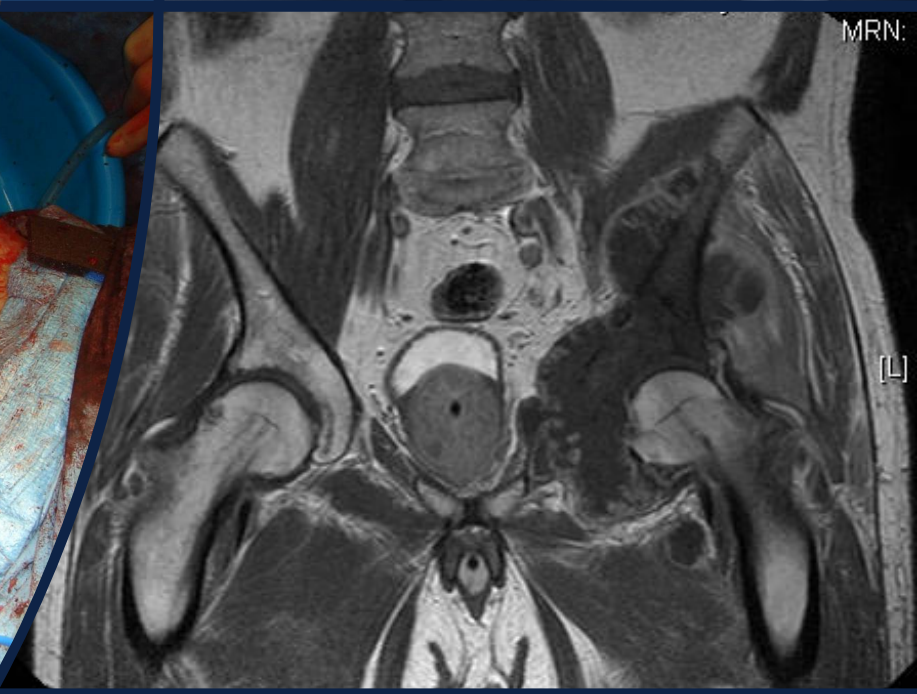
- Cornwall - 273 miles to see us in Oxford
- Bristol Outreach Clinic - improvement but still 190 miles
- Possible Solutions
  - Increased use of telemed / attend anywhere video follow up
  - Closer working relationship with local clinicians
  - More outreach clinic support for Southern catchment area??

Complex Cases

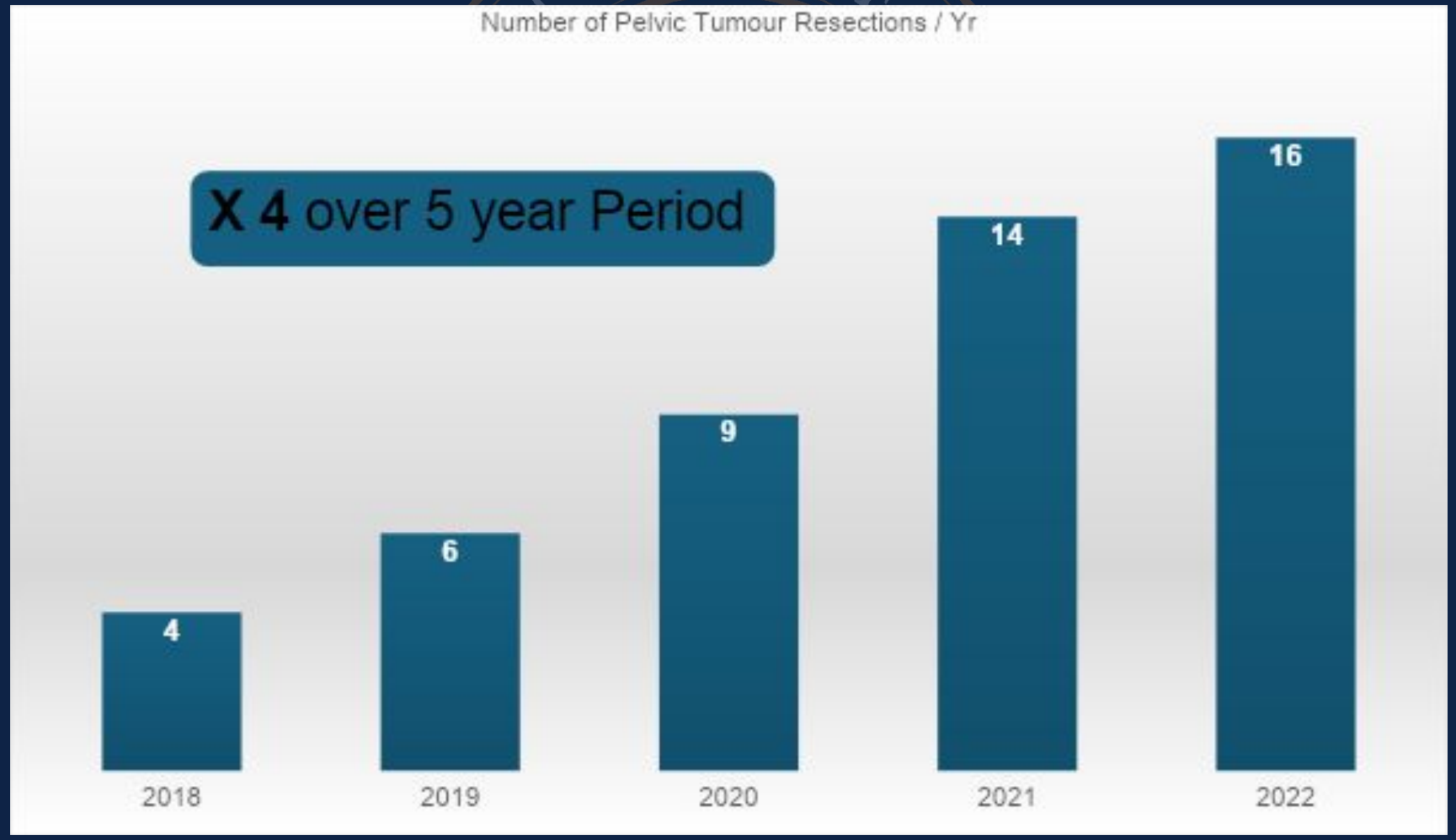
The Pelvic Pathway







Pelvic Tumour Resection Per Year (NOC Data 2018-2022)

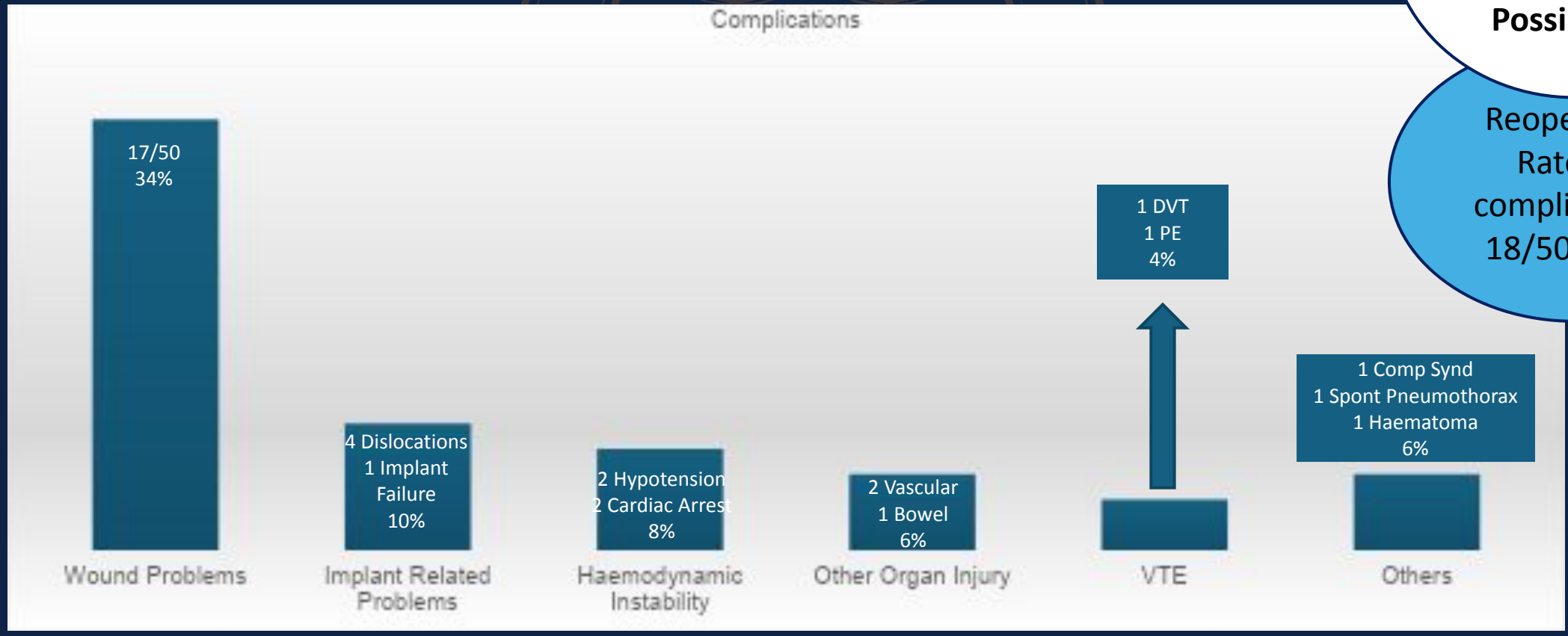


Pelvic Tumour Resection Per Year (NOC Data 2018-2022)

34 events in 28 pts. Complication rate 56%

2 Deaths in 28 days
Both Cardiac Arrest on Table
Possible PE

Reoperation Rate for complications 18/50 (36%)



Risk Stratification Tool Development
COMPOSURE: COMbined Pelvic Oxford SURgical Evaluation

Oxford Sarcoma

Initial Proposal

Main MDT
Identification of patients for pelvic surgical pathway

POAC:
high complexity peri-operative assessment clinic for risk stratification

MDT run clinic
- 2 pelvic surgeons
- Anaesthetist
- Plastic surgeons
- General surgeons
- Urology

Credits: images obtained from the freeweb

COMPOSURE score (out of 10)

Surgical Score	
Low grade tumour High grade tumour	0 1
P1 or P3 Resection P2 or P4 Resection	0 1
Resection only Reconstruction necessary	0 1
EBL < 2000ml EBL > 2000ml	0 1
Length of operation < 120 minutes Length of operation >120 minutes	0 1
No involvement of another surgical specialty Involvement of plastics or vascular or general surgeons	0 1

Medical Score	
ASA 1-2 ASA 3-4	0 1
Age <65 Age >65	0 1
non-smoker, non-diabetic Smoker or Diabetic	0 1
No perioperative treatment needed Chemotherapy or Radiotherapy, or perioperative intervention for optimisation	0 1

Perioperative surgical plan

0 - 4

Low risk:
- NOC, Ward based care
- Inpatient rehabilitation

5 - 8

Medium risk:
- NOC, enhanced HDU recovery
- Consider 2 pelvic consultants, with named next day consultant review
- Consider 2 anaesthetists
- Consider 3d model

9 - 10

High risk:
- Planned transfer to JRH ITU
- 2 pelvic consultants, with named next day consultant review
- 2 anaesthetists
- Cross matched at least 4 units
- Cell salvage available
- Consider angioembolization pre-operatively
- 3d model
- Consider community bed, outpatient referral for rehabilitation

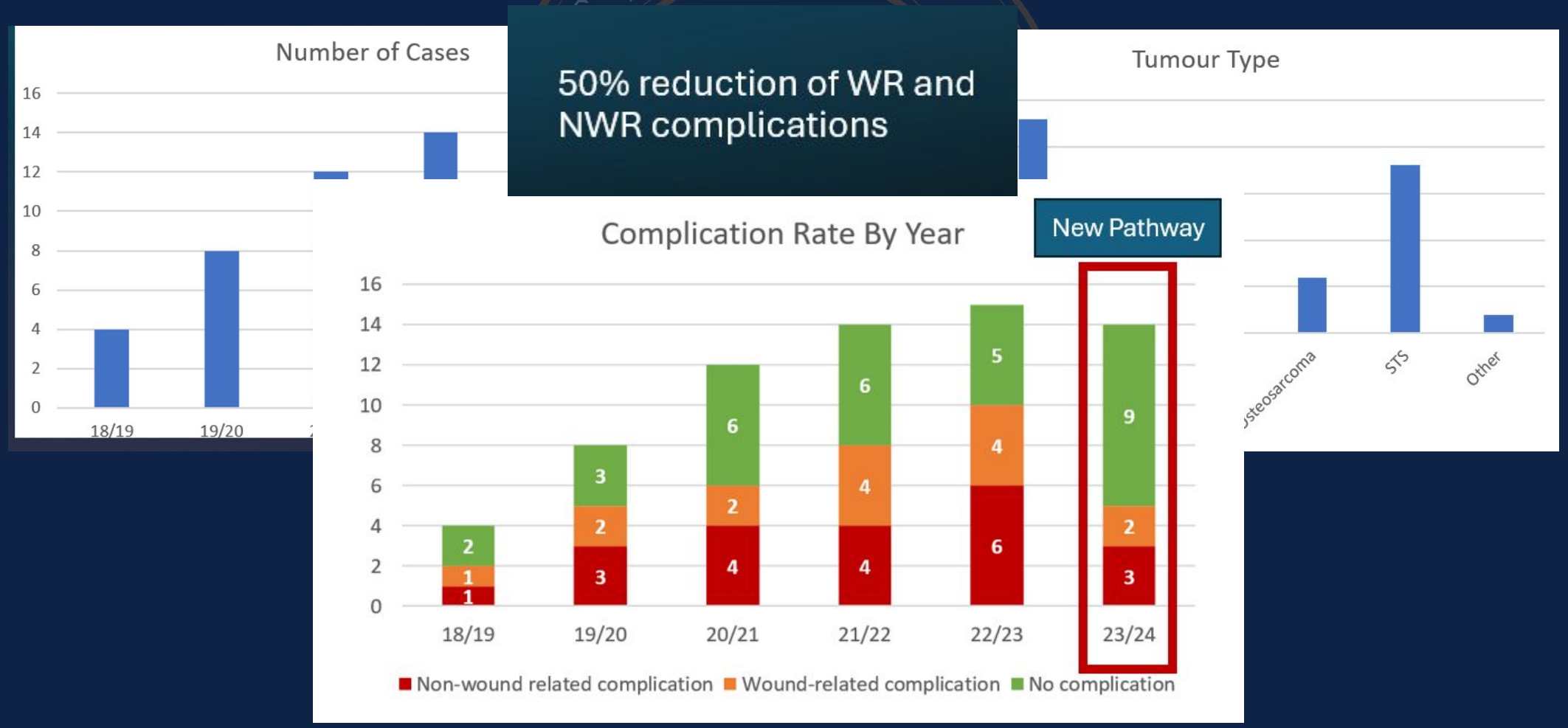
DO NOT START CASE WITHOUT ITU BED CONFIRMATION

New Pelvic Pathway started 1st Feb 2023

- **Initiatives already in place**
  - MDT Discussions – Multispecialty MDT
  - 2 Consultant Operating and 2 Consultant Anaesthetists
  - Plastic Surgery Support on all pelvectomies requiring extensile approaches
  - Regular Vascular, Colorectal, Urology MDT and Surgical Support
  - Developing of Surgical Expertise with Gynae-Oncology Pelvic Exenteration Service

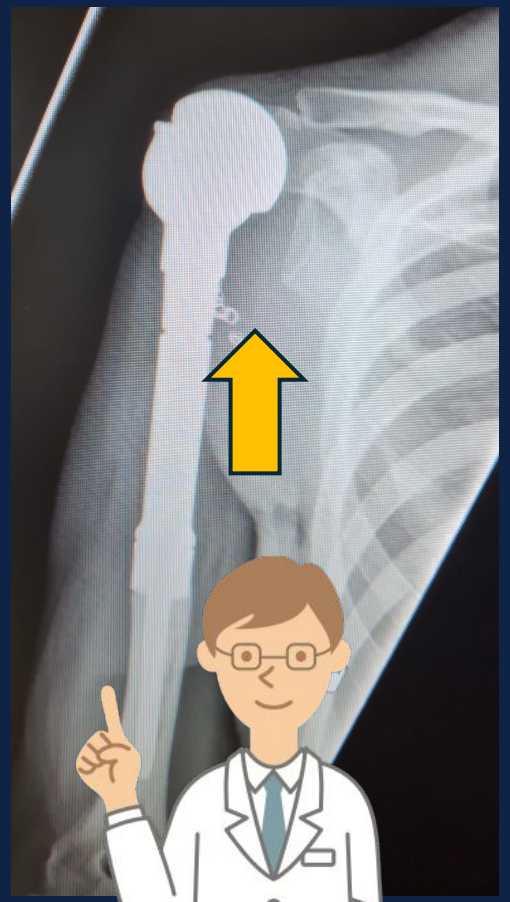
- **New Dedicated High-Risk Pathway**
  - Dedicated Pelvic 1 stop clinic – anaesthetics, physio, OT, specialist nurse
  - Preoperative risk stratification scoring – High risk patients to operated at sites where ITU facilities available
  - Consenting according to Montgomery principles / video consent

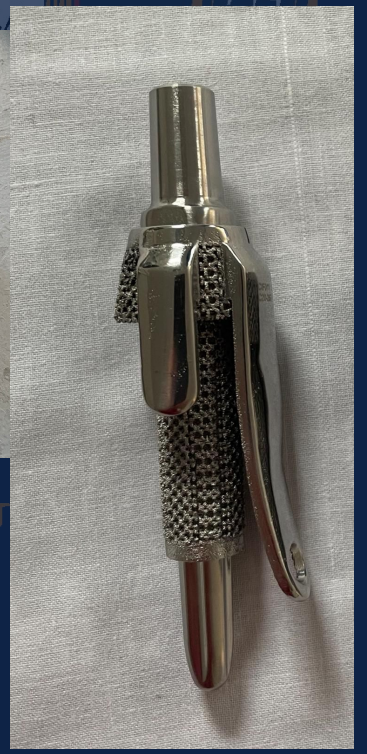
Pelvic Pathway Audit Cycle II

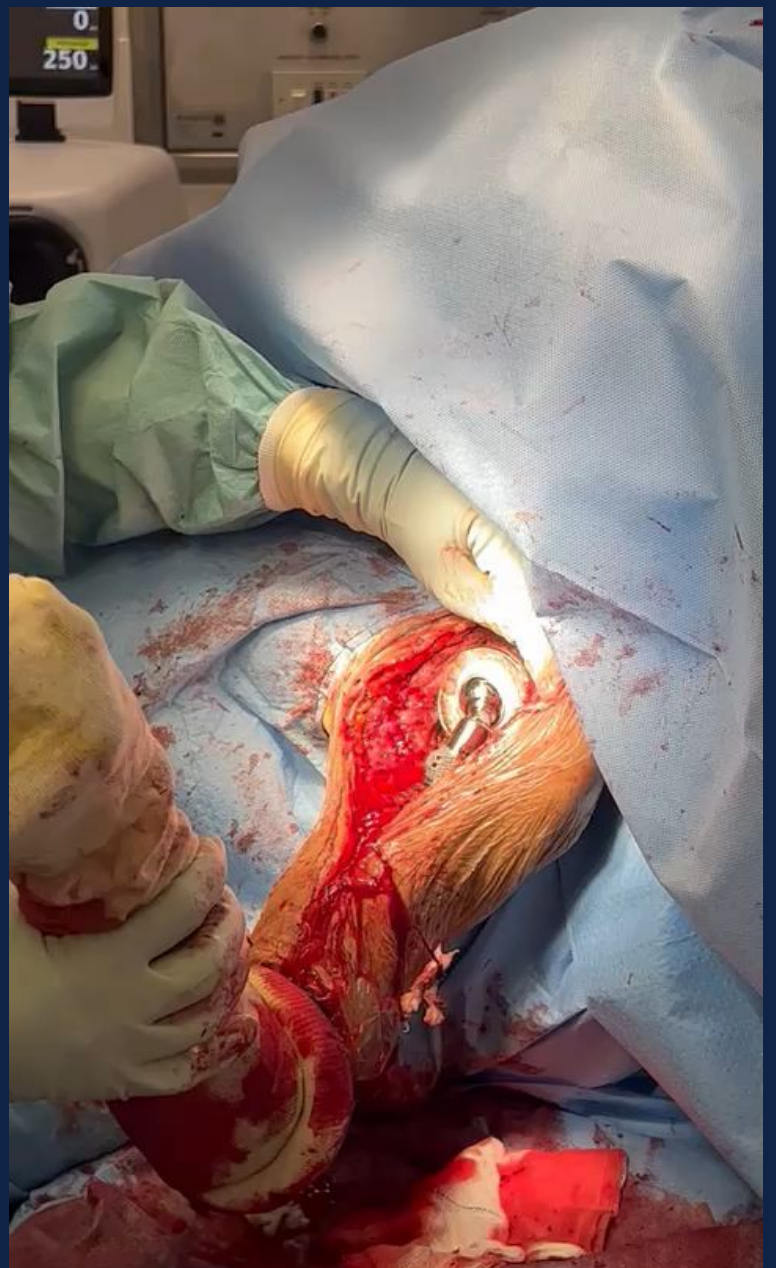


Complex Cases

Complex Upper Limb List



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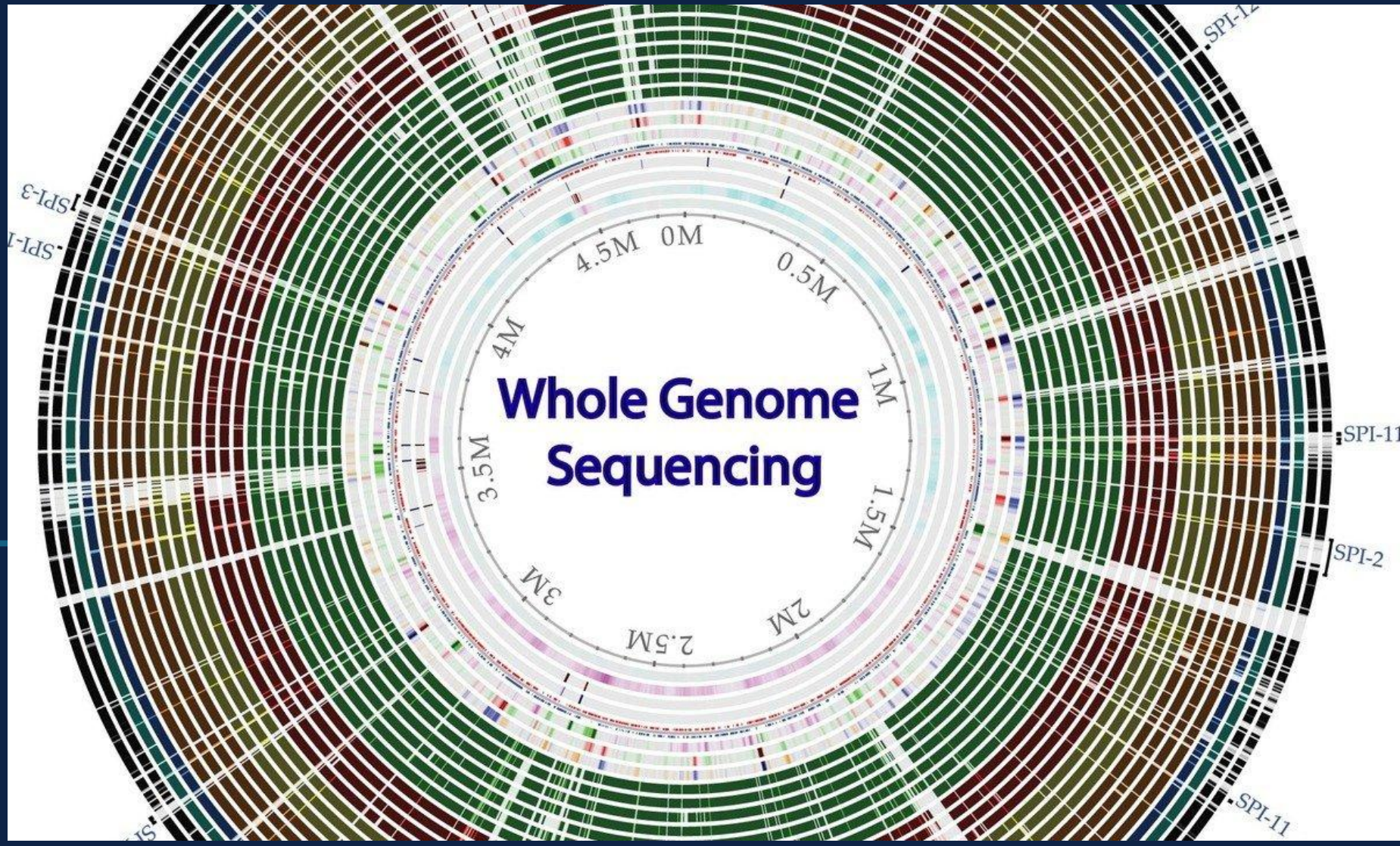
Genomic Sequencing At OSS



Launched in 2012, the 100,000 Genomes Project was the first UK project offering whole genome sequencing (WGS) to patients

NHSE now funds WGS for several groups of patients including sarcoma patients

We aim to offer WGS to all sarcoma patients who come through the Oxford Sarcoma Service as part of their diagnostic work up to optimise the patients' care by the detection of:

somatic driver mutations in the tumour genome, which are clinically actionable and may affect eligibility for targeted treatment or clinical trials.	constitutional (germline) mutations predisposing to cancer, with possible implications for management and surveillance of the patient and their families.	mutational signatures that may give information about mechanisms of disease or environmental mutagens.

Oxford Sarcoma

Aug 2021 clinical fellow for one day/week

- Worked with radiology, pathology and oncology
- Referral pathway optimised
- Education
- Dedicated genomic practitioner team identified

In 2023 >90% of new/recurrent sarcomas have had fresh tissue stored from biopsy or surgery for WGS

- Average turnaround time of 6 weeks

Whole genome sequencing of primary bone tumours June 2021 – April 2024

	June 2021-May 2022		June 2022-May 2023		June 2023-April 2024		Total
	Adult	Paediatric	Adult	Paediatric	Adult	Paediatric	
Osteosarcoma	9	2	4	1	4	1	**21**
Ewing Sarcoma	2	2	3	2	3	3	**15**
Chordoma	1						**1**
Chondrosarcoma	1		1		6		**8**
Giant Cell Tumour of Bone			1				**1**
Spindle Cell Tumour of Bone					3		**3**
Yearly total	**17**		**12**		**20**		

WGS is proving to be a robust methodology which provides meaningful results that directly affect the treatment and prognosis of our sarcoma patients.

It has become a key component in our drive to achieve rapid and accurate diagnosis of this challenging group of tumours. As well as finding known mutations, we are increasingly identifying novel mutations and rare fusions which will increase our understanding of the key molecular pathways driving sarcoma tumorigenesis.

Cooperation with other referral centres and combining our NGS / WGS results data is important to maximise the benefit of this exciting technology in the future.

Oxford sarcoma service national target data 2024

Oxford Sarcoma

31 day
Patient treated within 31 days of clinicians deciding a treatment plan.
National target: 96%

→ 34 patients treated
29 treated within target
5 breaches reported

→ Target achieved
85.3%
+4.9% from 2023

28 day
Patient is diagnosed, or had a cancer ruled out
National target: 75%

→ 201 patients referred
133 treated within target
68 breaches reported

→ Target achieved
66.2%
+3.0% from 2023

62 day
Patient has received diagnosis and started their 1st treatment.
National target: 85%

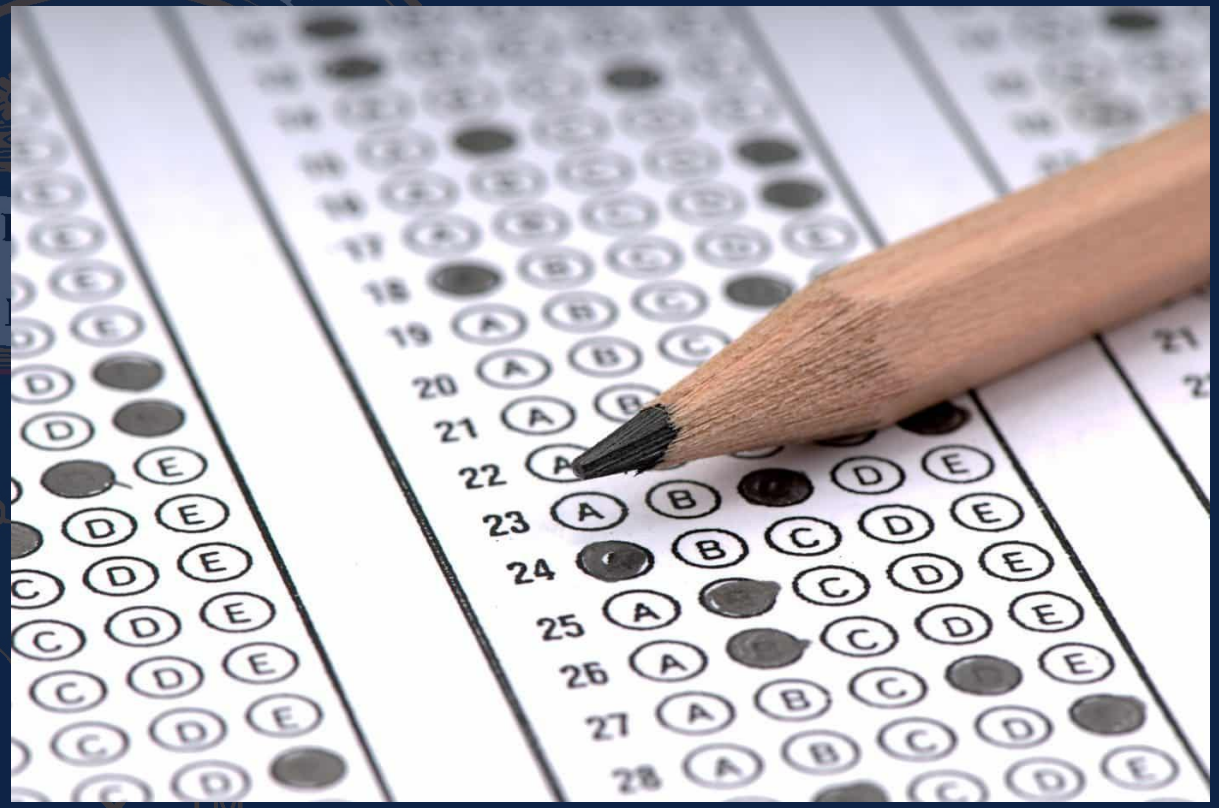
→ 32 patients treated
19 treated within target
13 breaches reported

→ Target achieved
59.4%
+9.4% from 2023

Reported delay reasons
OPA capacity, patient communication outcome, patient choice, IPT's, surgery, radiotherapy (exc proton therapy), anti-cancer drug regimen (cytotoxic chemo)

Mitigations
Increase in divisional escalation, redesign of pathways, improvement of clinical & administrative engagement, local & divisional weekly PTL meetings

How did we do at the 2024 National Peer Review?



OSS – Overall Good !!

Significant Achievements and Accolades

- The team demonstrated a unified and cohesive commitment to delivering high quality care to patients.
- One stop clinics including access to scans within the one appointment.
- Paediatric bone sample collection under local anaesthetic.
- All patients undergo genomic screening.
- Providing videos for informed consent.
- Improving of coding to promote equality diversity and inclusion across the service.
- Additional staff training for caring for people with learning difficulties.
- Email alert for missed calls to the CNS for follow up.
- International research.
- Patient mentoring.

Serious Concerns

There is a lack of dedicated specialist physiotherapist time for the primary bone service with only a 0.5 whole time equivalent post, which is also impacted by the lack of extensive knowledge and experience within this role due to this being a rotational post.

Areas of Improvement

1. Continue work to meet 28 and 62 day targets.
2. Strategic succession planning is required with clear timelines.
3. No robust process for completion of HNA.
4. Lack of dedicated psychological support.
5. Locum consultant sarcoma surgeon should be converted from a locum to a substantive post.
6. Secure funding for continued CNS provision.

Steps taken to improve…

01	**Improve data capture**	• Admin staff are being reminded by senior nurses in outpatients to record ethnicity at check-in • ‘Ethnicity cards’ at check in
02	**Causes for differences in wait times / cancellation rates**	• Exploring ‘apparent’ causes of higher wait times / cancellation rates in ethnic minorities and more deprived patients. Is it due to poor data capture or other causes?
03	**Learning Disabilities**	• Trust project: reasonable adjustment flag and hospital passport easy-access • Display of posters on wards and in offices • Easily accessible picture pain scores on wards • Quick fire learning events

There are four risks on our Corporate Risk Register which impact our Service

- **ID: 1614 – Recruitment and retention**
  - If we are not able to recruit – this will impact on all services and cross refers directly to your local risk ID: 2463 – Locum orthopaedic consultant, and, the Directorate ID: 262 – Psychological medicine cover.
- **ID: 1119 – Finance and breaking even (3-5 yrs.)**
  - If the trust does not break even, this will have an impact upon all services across the trust as there will be less money available.
- **ID: 1136 – Diagnostic capacity**
  - The capacity to meet the diagnostic testing requirements may have an impact on our patients waiting for cancer diagnosis.
- **ID: 1150 – Research Capacity**
  - This is about the ability to increase research to pre-covid levels because some staff are diverted to other activities and projects to restore services as normal.

Psychological Medical Support is on our Divisional Risk Register

- **ID: 262: Psychological medicine Cover for people with complex needs**
  - This risk has an impact upon the sarcoma service and the provision of psychological medicine to patients who require this support. It also cross refers to recruitment and retention and finance in the corporate risk register

Directorate Risk Registers
Strategic Theme: No Strategic Theme Selected

ID	Risk Owner	Title	Description	Cause	Effect	Initial			Controls	Current			Reviewed Actions with updates	Action Target Date	Target		
						Likelihood	Consequence	Inital Score		Likelihood	Consequence	Current Score			Likelihood	Consequence	Target Score
262	Claire Isaac	Psychological medicine cover in non-integrated areas of the trust - PSY-2018-005	Psych Med (psychiatry) input to unfunded clinical areas Psychological medicine provide comprehensive psychiatric care to patients under the care of teams in which they are integrated. There are areas of the hospital in which psychiatry are not integrated, but where patients are also in need of psychiatric care. We are able to provide face to face input for patients who are presenting with acute psychiatric problems, but we do not have the resources to provide face to face care for those with less acute psychiatric problems.	- complex mental-physical comorbidity in patients in all Trust specialties - clinical areas that do not commission integrated psychological medicine consultants have significant need for psychiatric input. Several services manage patients with biopsychosocial complexity including surgical oncology, gastroenterology, gynaecology, and plastic surgery and have particularly high unmet need. - Psych Med is commissioned to provide fully integrated service to specialties that have commissioned psychiatrists, and an emergency-only reactive service to the rest of the Trust	- Psych Med unable to fully meet the need without funded consultant input to the specialty, but demands / need for psychiatric input outweighs supply of psychiatrist availability Impact: - sub-optimal psychiatric provision to patients and staff in unfunded specialties - for patients presenting with high levels of complexity	2	5	10	MS: Psychiatry clinical lead to notify clinical directors around trust that unfunded specialties will receive an emergency reactive service from Psych Med, to enable Psych Med to priorities departments who have funded embedded Psych Med input. 05/10 JH update: Continue to limit work with unintegrated services Agreed standards of what counts as an 'emergency presentation' to escalate unfunded patient to full assessment and management Operating procedure for Psychiatrists responding to requests for consultations from unintegrated services Data on activity with unintegrated services to allow feed back and monitor time taken from integrated services 04/08/2021 LC update: Psychological Medicine have commenced a pilot project where all consultant psychiatrists are on a rota to cover trust wide unfunded areas of the hospital. 24/11/2021 LC update: The consultant of the week rota appears to be working well and is currently under evaluation. There are no plans to cease this development.	1	3	3			1	2	2

Recruitment is on our local Risk Register:

There is one risk on the Sarcoma risk register:

- **ID: 2463 - Recruitment –Orthopaedic oncology Locum consultant and substantive post.**
  - This risk cross refers to two risks on the corporate risk register:
    - Recruitment and retention and,
  - financial break even.

ID	Risk Owner	Title	Description	Cause	Effect	Initial			Controls	Current			Reviewed Actions with updates	Action Target Date	Target		
						Likelihood	Consequence	Initial Score		Likelihood	Consequence	Current Score			Likelihood	Consequence	Target Score
2463	Thomas Cosker	orthopaedic oncology locum consultant	There is a risk that, if the locum post does not become substantive, then the service will not be delivered to full potential.	The service currently employs one of the five orthopaedic oncology posts as a locum consultant. This is particularly the case for the complex pelvic service where the new governance arrangements mean that it is essential that two consultant surgeons undertake all such work.	The service and patients will be impacted by an inability to deliver the complex pelvic caseload safely since Mr Whitwell and Mr Siddiqi (the locum) operate in tandem for all such cases and this has resulted in a significant reduction in complications as demonstrated by our recent audit.	4	4	16		4	4	16	A business case is under development to create a substantive post. This is in the final stages of submission and there has been agreement to fast track this once ready. There is a concern that with the current moratorium on funding for new posts this may not be approved.	31/12/2025	4	1	4

Substantive Consultant Appointed.
More Admin Support and CNS time required

OXMINT

SOBELL HOUSE HOSPICE

NHS
Oxford University Hospitals
NHS Foundation Trust

UNIVERSITY OF OXFORD

Need is the mother of Invention

- OxMINT was initially conceived as a multi-specialty interest forum
  - all patients with metastatic bone disease which is causing untoward symptoms can be considered for best intervention.
- Patients can be referred to the team and their cases are considered in a weekly virtual MDT setting where imaging and clinical findings are reviewed and best options for care recommended. These discussions are then recorded on the electronic patient record and fed back to referrers.
- Clear communication corridors and inclusion criteria are defined for interaction with near peer MDTs such as the Spine/Onc meeting and the Sarcoma MDT.

OXMINT Service: design, implementation and data so far

Oxford Sarcoma

QUORACY

Inital consultation specialists

- Interventional Radiology
- Spine or Appendicular Orthopaedic Surgery
- Clinical Oncology
- Palliative Medicine

CORE GROUP

Additional groups included specific to patient outcomes

- Interventional pain
- Neurosurgery
- Psychological Medicine
- Physiotherapy
- Nursing

EXTENDED FAMILY

As required for flexibility and support with complex cases

- Anaesthetics
- Pharmacy
- Hospital at Home

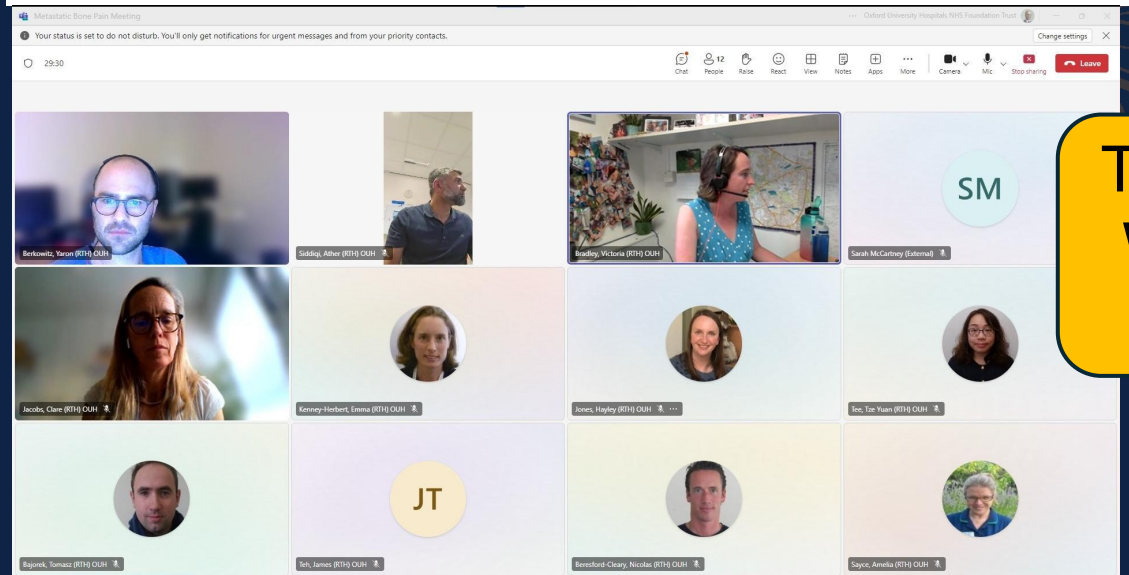
OXMINT Service: design, implementation and data so far

Inclusion Criteria for OxMINT Referral:

- Adult patients (18 years of age or over at time of referral)
- Resident in the Buckinghamshire Oxfordshire Berkshire West Integrated Care Board catchment area
- Metastatic malignant disease in the bony skeleton
- Symptoms including but not limited to pain or risk of fracture.

Exclusion Criteria:

- Spinal disease with neurological compromise requiring emergent review → Spine Onc meeting.
- Metastatic spinal cord compression suspected → Spine Onc meeting
- Primary bone tumour → Sarcoma MDT
- Patients from out of area → Local service
- Under 18years old → Paediatric service



OxMINT MDT PROFORMA

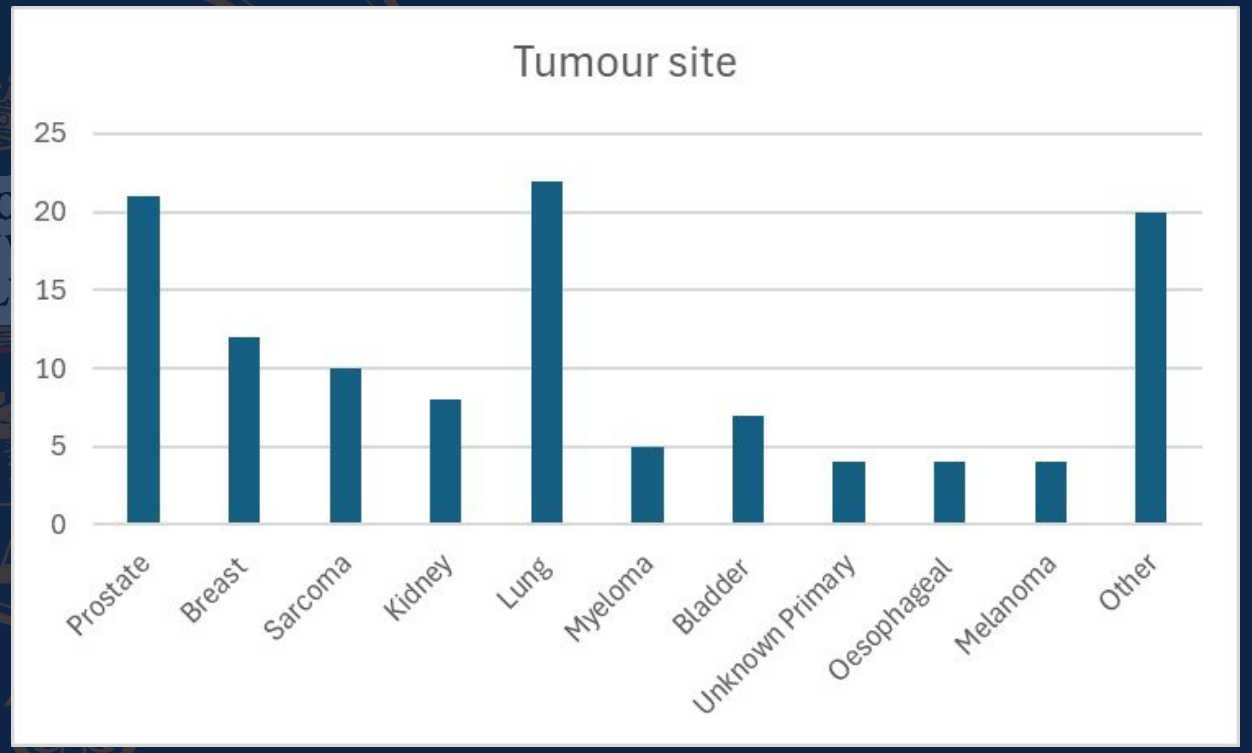
Referrer	
Name	
MRN/NHS	
Oncological Diagnosis including recent and current SACT line	
Relevant Past Medical History	
WHO Performance Status	
Current location	
Current analgesic regime	
Problem to be addressed	
Checklist:	
Fit for GA	
Able to lie supine	
Anti-coagulation?	
Diabetic?	
Decision of MDT	

Teams MDT – Wednesday Afternoon

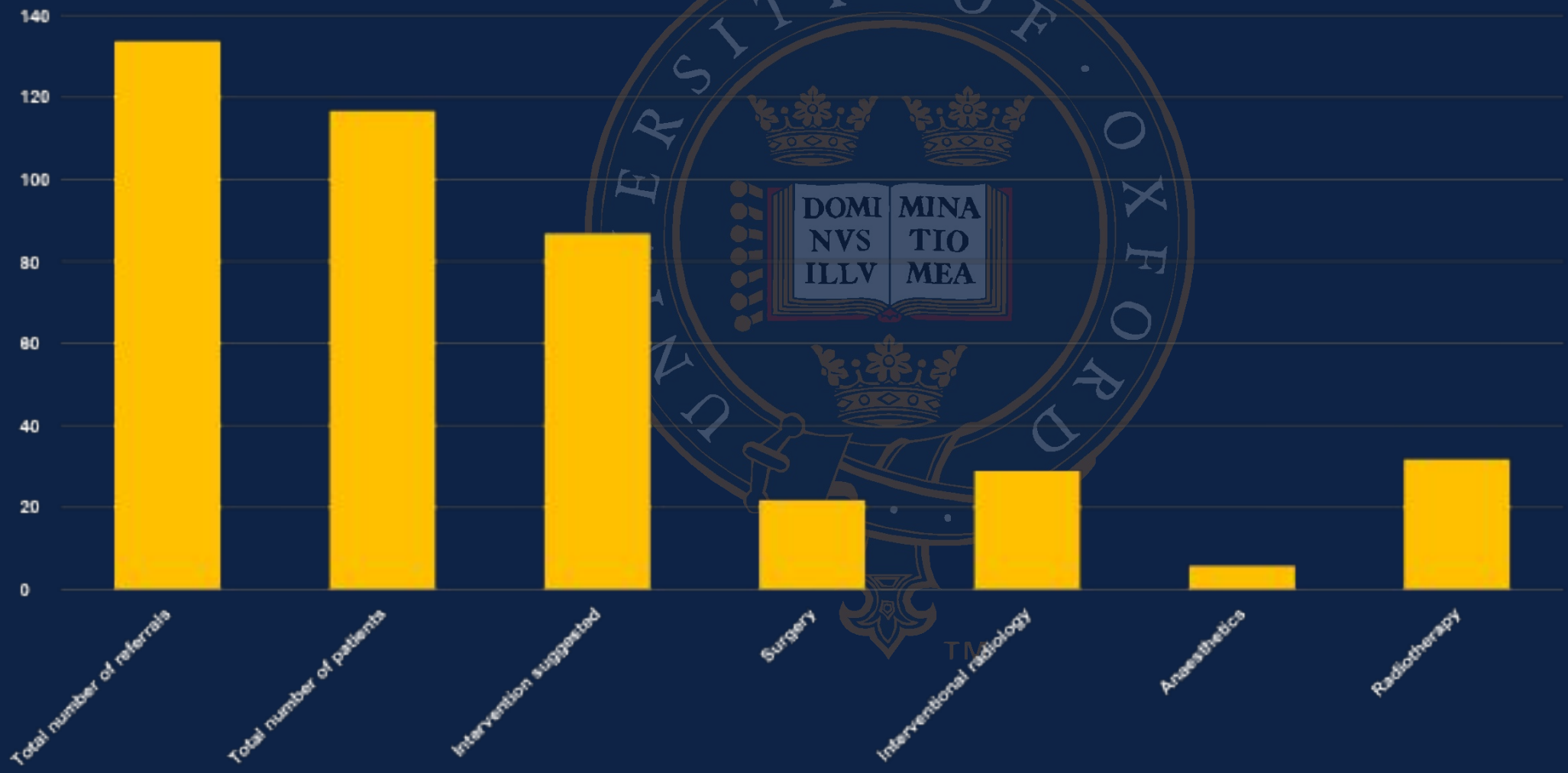
OxMINT@ouh.nhs.uk

Caseload Review

- MDTs commenced on the 29th November 2023
  - In the following 10 months 117 unique patients were discussed in 134 MDT discussions
  - Patients had a spread of haemato-oncological diagnoses, with an average age at diagnosis of 66 years, 58% females



OXMINT Service: design, implementation and data so far



OXMINT Service: design, implementation and data so far

What makes it Unique

- One stop shop for all MBD (Axial and Appendicular Skeleton)
- Timely discussions and interventions – saving bed time / cost to trust – ADHOC discussions allowed

OXMINT Relevance to the Southwest and opportunities

- Currently open to BOB (Buckinghamshire, Oxfordshire, Berkshire)

- Opportunity to discuss complex cases that need supra-regional discussion and possibly OSS to take over – provided local clinicians available to attend and present case.

- **Regional MBD registry?!**

In summary: we are proud of the service we provide and of the team in which we work…..