HAND TUMOURS: A RETROSPECTIVE ANALYSIS OF AETIOLOGY AND REFERRAL PATHWAYS SAFETY

East Midlands Sarcoma Service

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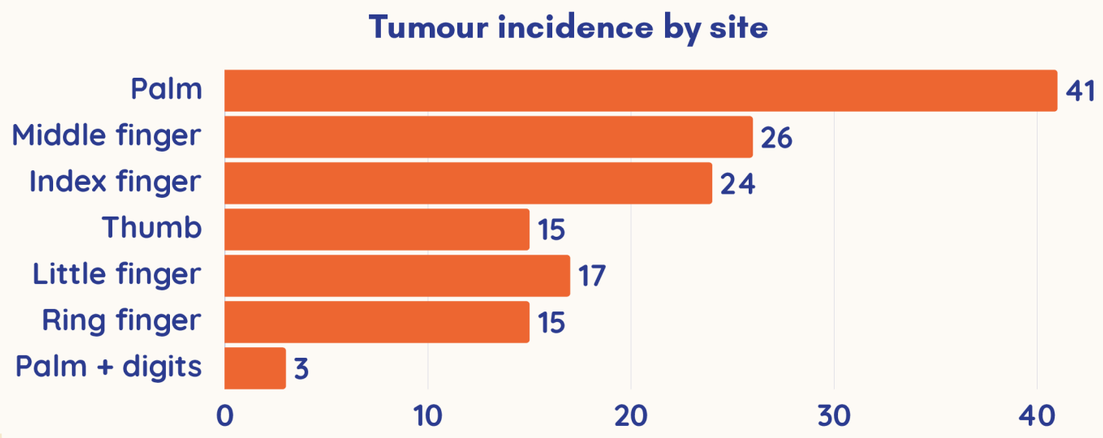
INTRODUCTION

- Increasing workloads in sarcoma and elective orthopaedic hand services highlight the need to evaluate existing referral pathways for hand tumours.
- No standardised pathway currently exists for hand soft-tissue tumours.
- Hand sarcomas are rare, but early specialist diagnosis is essential to avoid delayed treatment, unnecessary amputations, and compromised survival.
- **Aim:** To retrospectively review hand tumours managed at our Sarcoma Centre to assess tumour aetiology and evaluate the safety of current referral pathways in our region.

DEMOGRAPHICS

- 143 patients included (mean 52.9 (2-88) years, M:F 7:9)



RESULTS

Triage and pre-operative assessment

- 35.6% (n=51) were discussed at the regional triage soft-tissue sarcoma service.
- 4.9% (n=7) underwent core needle biopsies. Of these, 5 were discussed at the EMSS MDT.

Surgical management

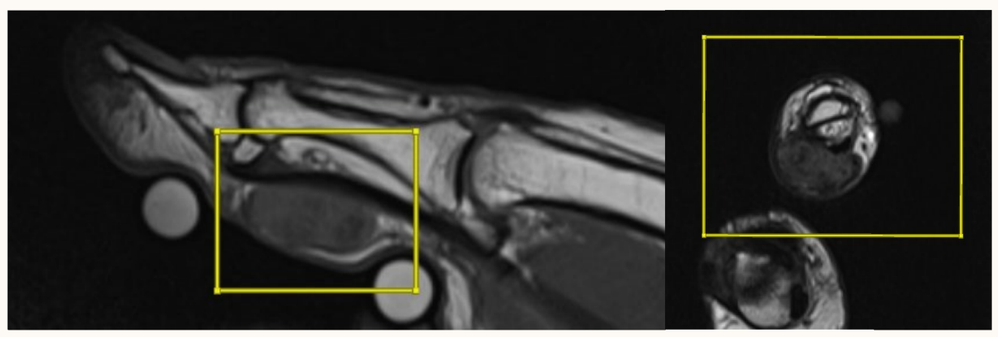
- 88.1% (n=126) of the excision biopsies were performed by local orthopaedic/plastic hand surgeons.
- 17 were performed by EMSS (sarcoma) surgeons.

Histology

- Nearly 30 distinct pathologies were identified.
- Tenosynovial giant cell tumour was the most common (27.3%, n=39), followed by lipoma (9.8%, n=14).
- Other common pathologies included angioleiomyoma, hemangioma, and myopericytoma (4.9%, n=7 each).
- No malignant pathologies were identified.

Clinical outcomes

- 3.5% (n=5) of all cases experienced local recurrences.
- 1.4% (n=2) had local complications (1 infection, 1 stiffness).



Sagittal T1 and axial T2 weighted MRI images of a nodular TGCT involving the thumb.

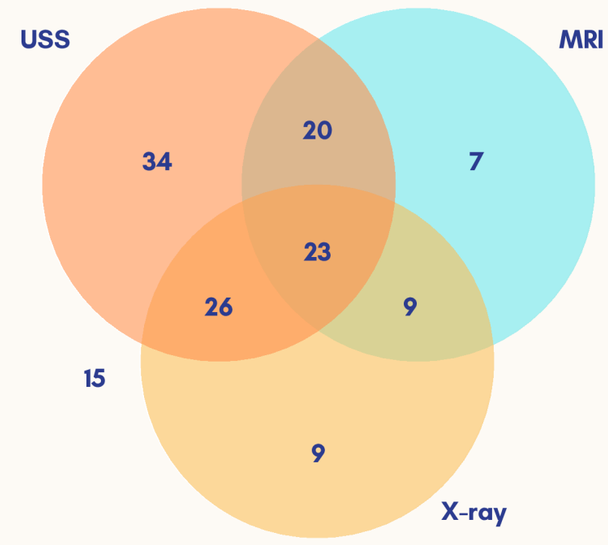
METHODS

- **Study Design:** Retrospective analysis of soft-tissue hand tumours managed by the East Midlands Sarcoma Service (EMSS) and University Hospitals of Leicester NHS Trust (UHL) elective hand services from 2019 to 2024.
- **Data sources:** Patients coded for excision of soft-tissue hand or digital tumours were identified via local coding teams, with data obtained from electronic records, imaging (US/MRI/X-ray), PACS, histopathology reports, and clinical notes.
- **Inclusion Criteria:** All patients undergoing excision of soft-tissue tumours from the digits or hand distal to the wrist crease.
- **Exclusion Criteria:** Benign ganglion cysts, skin lesions, bone pathologies, and core/needle biopsies.
- **Data Collection:** Included patient demographics, tumour site & size, imaging modality, histopathology, EMSS MDT outcomes, complications, and oncological outcomes where applicable.

IMAGING

The use of pre-excision imaging varied considerably:

- 23.8% (n=34) of patients had ultrasound only, 4.9% (n=7) had MRI only, and 6.3% (n=9) had X-ray only.
- 14.0% (n=20) underwent a combination of USS + MRI, while 18.2% (n=26) had USS + X-ray and 6.3% (n=9) had MRI + X-ray.
- 16.1% (n=23) received all three modalities (USS + MRI + X-ray).
- Overall, 54.9% (n=79) underwent a combination of imaging modalities.
- 10.5% (n=15) had no imaging prior to excision.



Pre-op imaging modalities

CONCLUSION

Our data confirms that the vast majority of soft tissue hand tumours are benign. Despite this, clinicians must remain vigilant for sarcoma through the appropriate use of ultrasound +/- MRI. If no concerning features are identified on imaging, our findings suggest that the analysed cohort can be safely managed with a marginal excision under the remit of a sarcoma service or elective hand service. Further work with a larger dataset is underway to identify the incidence of malignant hand tumours, and any potential clinical or radiological characteristics concerning for malignancy.