

Case Report: A Case of Pleomorphic Sarcoma of Left Femur with Large Pleural Metastasis

TS CHANG¹, SH HO¹, ALIZAN K², BK YOONG³, KRISHNASAMY S¹

¹ DIVISION OF CARDIOTHORACIC SURGERY, UNIVERSITY MALAYA, MALAYSIA

² DIVISION OF PLASTIC AND RECONSTRUCTION SURGERY, UNIVERSITY MALAYA, MALAYSIA

³ DIVISION OF GENERAL SURGERY (HEPATOBILIARY), UNIVERSITY MALAYA, MALAYSIA



Introduction

Undifferentiated pleomorphic sarcoma

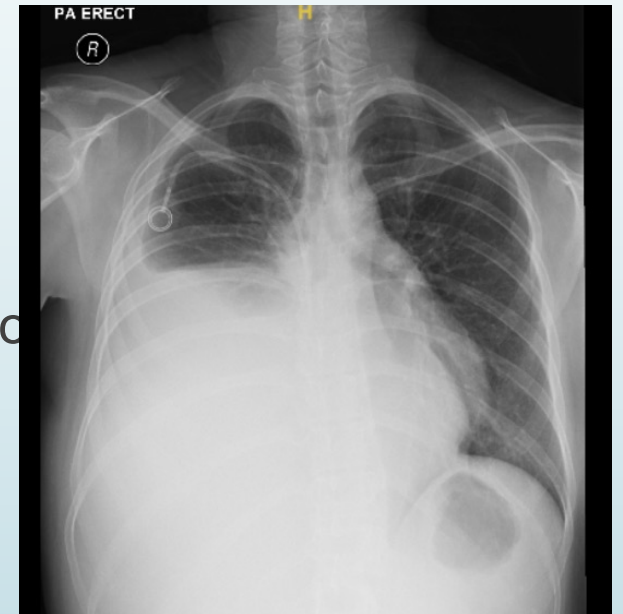
- A subtype of **soft tissue sarcomas**
- A **heterogeneous group of mesenchymal neoplasms** that commonly occur in
 - Extremities (proximal femur or humerus)
 - Retroperitoneal space
- Usually derived from **connective tissues**
 - Adipose tissue
 - Blood vessels
 - Nerves
 - Bones
 - Cartilages

Introduction

- **Surgical wide local excision of tumour with clear surgical margin followed by radiation therapy** is the treatment of choice.
- **Local recurrence rate** is as high as **13-42%**
- **High potential of distant metastasis** to lung, lymph nodes and liver
- Isolated pulmonary metastasis as high as **40%**
- We are reporting a case of recurrent metastasis of undifferentiated pleomorphic sarcoma of right femur to right thoracic region
 - required extensive *En-Bloc* resection of the mass with rib plating, diaphragm and chest wall reconstruction

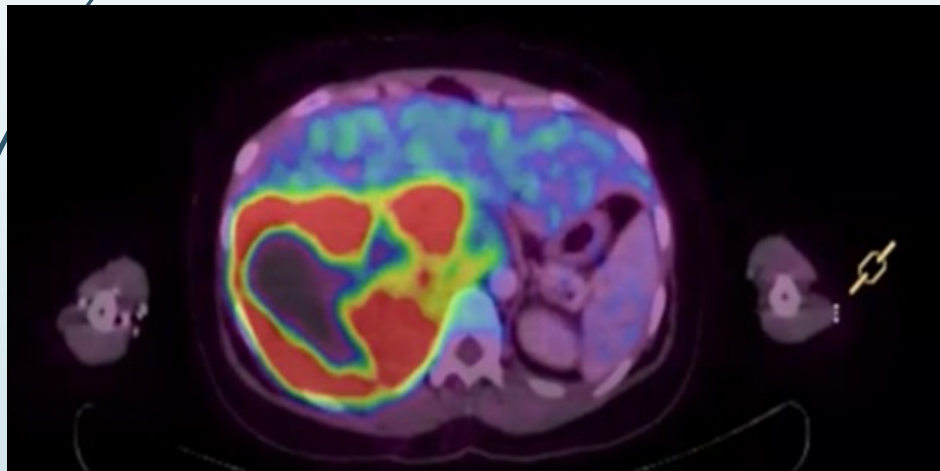
Case Presentation

- ▶ Patient is a 28 years old lady
 - ▶ underlying history of undifferentiated pleomorphic sarcoma of left distal femur
 - ▶ Year 2019: post wide local excision of tumour
 - ▶ Year 2020: right lower lobectomy (distant metastatic of the undifferentiated pleomorphic sarcoma)
 - ▶ Year 2021: wedge resection of left lung (distant metastatic of the undifferentiated pleomorphic sarcoma)
- ▶ Initial presentation
 - ▶ **Right chest wall pain**
 - ▶ **Shortness of breath** } 2 months duration
- ▶ CXR showed **huge right hemithorax mass** with pleural effusion

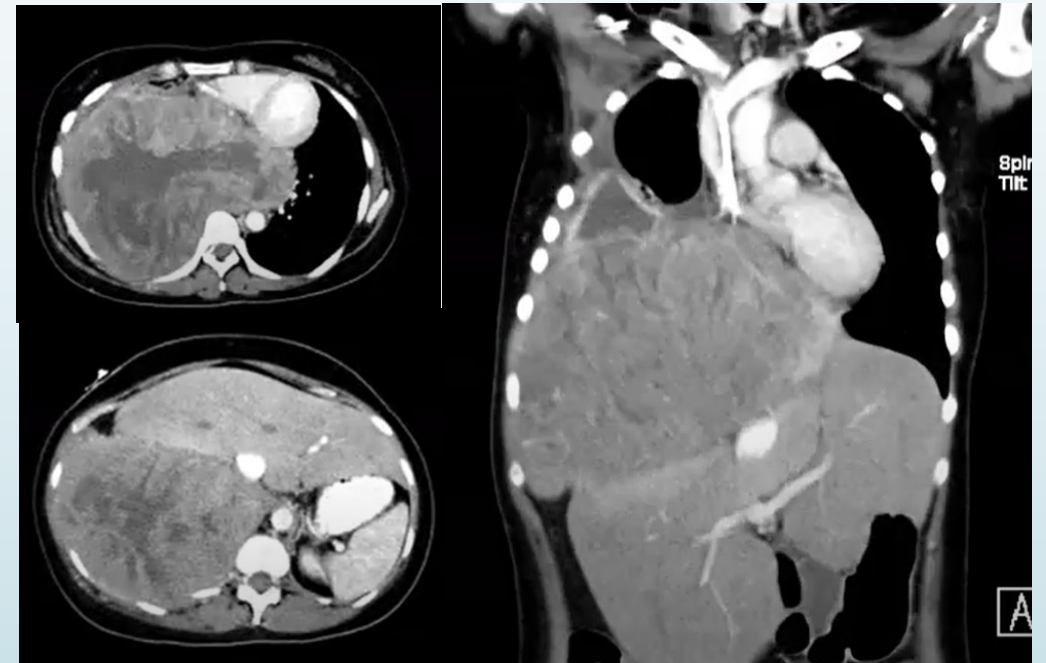


Case Presentation

- ▶ **PET CT (13th June 2022)** **After 1 month**
 - ▶ **No local recurrence** of the disease
 - ▶ A large **right pleural mass (10x15x16cm)** involving diaphragm, compressing on liver and inferior vena cava.

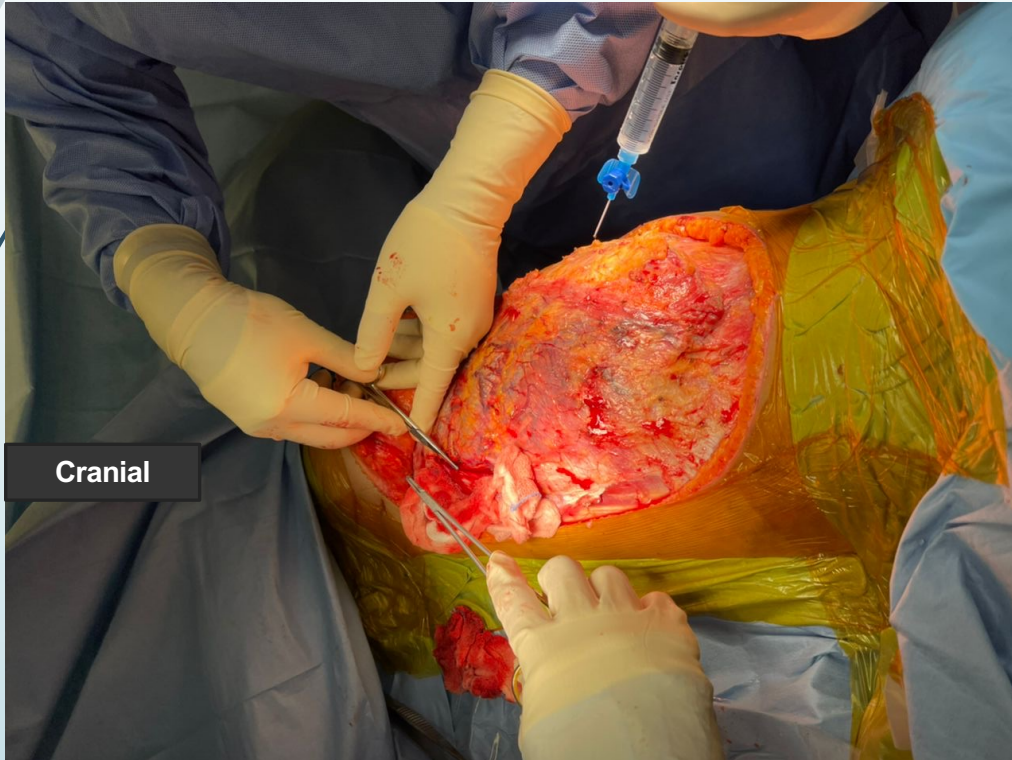


- ▶ **CECT Thorax (14th July 2022)**
 - ▶ Large solid-cystic right supradiaphragmatic mass measuring **15.1x19.4x21.7cm (rapidly increasing in size)**



Case Presentation

- ▶ Right thoracotomy (U- shaped incision) was performed
 - ▶ For better exposure of surgical field (in view of large hemithorax tumour)



- ▶ Simultaneously, right pedicle latissimus dorsi was harvested for diaphragmatic repair by plastic and reconstructive team

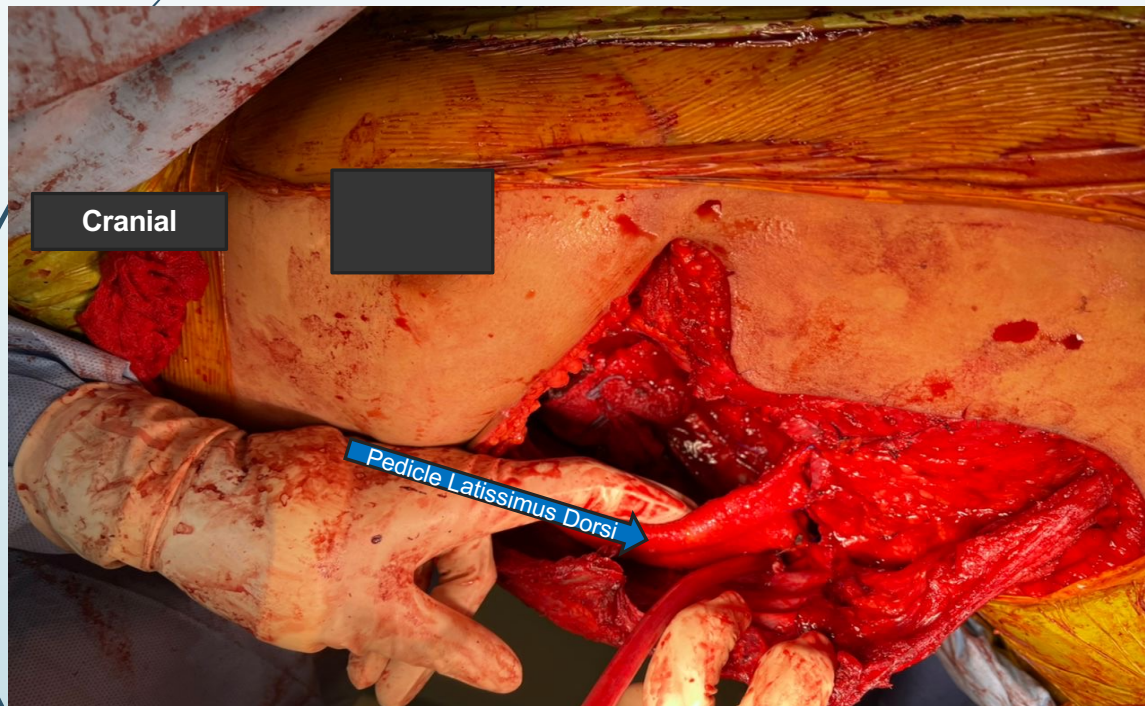
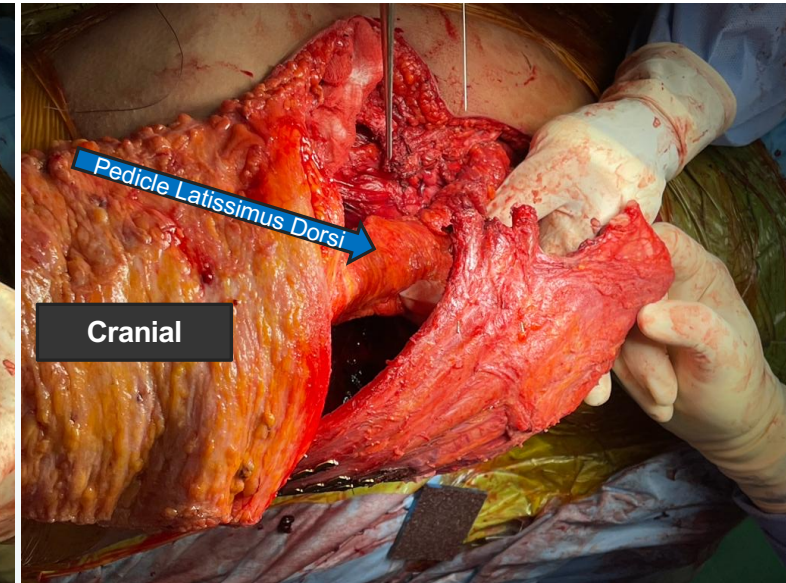
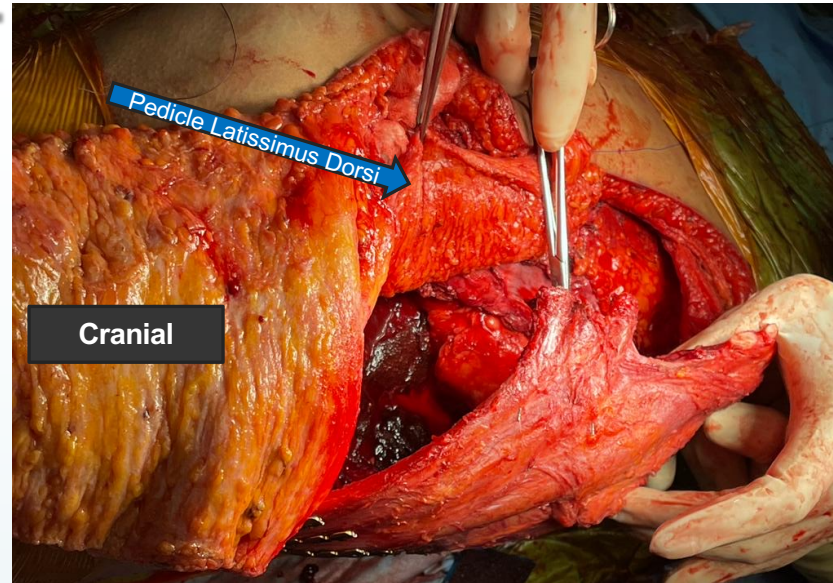
Case Presentation

- ▶ *En Bloc* resection of right pleural mass with wedge resection of right upper lobe and diaphragm resection by cardiothoracic team
- ▶ Mobilization of mass from liver and inferior vena cava was performed by hepatobiliary team



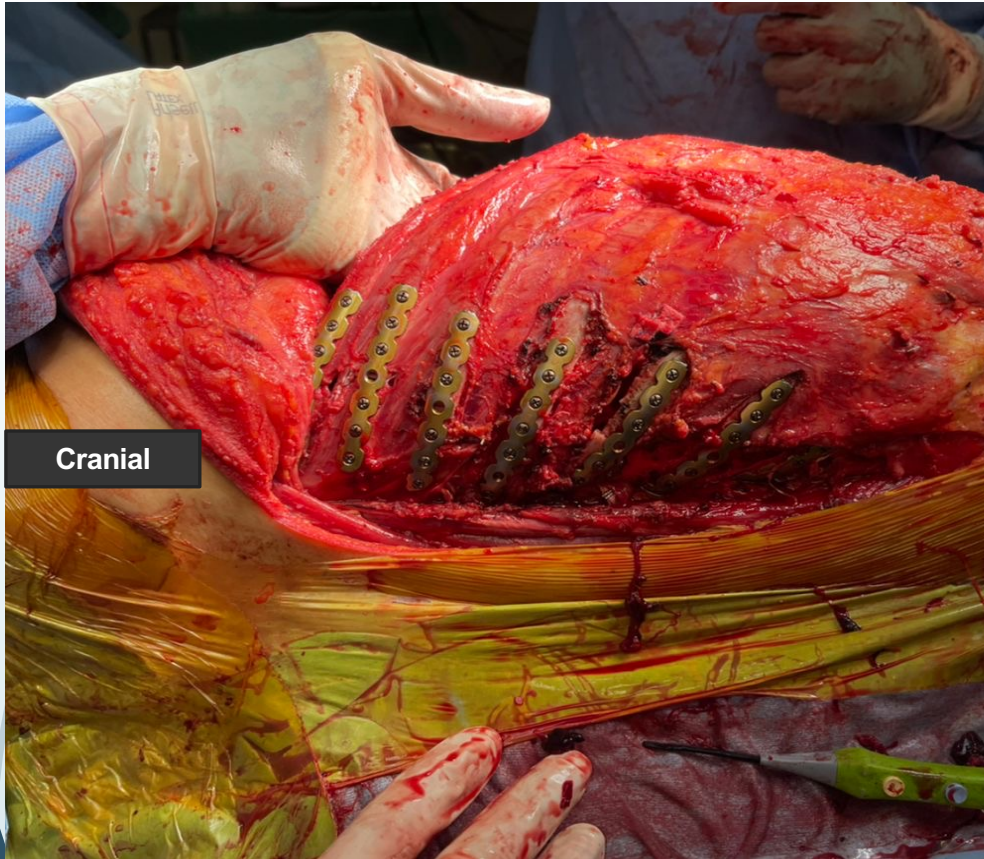
Case Presentation

- Pedicle latissimus dorsi was sutured to remnant of right diaphragm



- Successful right diaphragm reconstruction with pedicle latissimus dorsi flap

Case Presentation



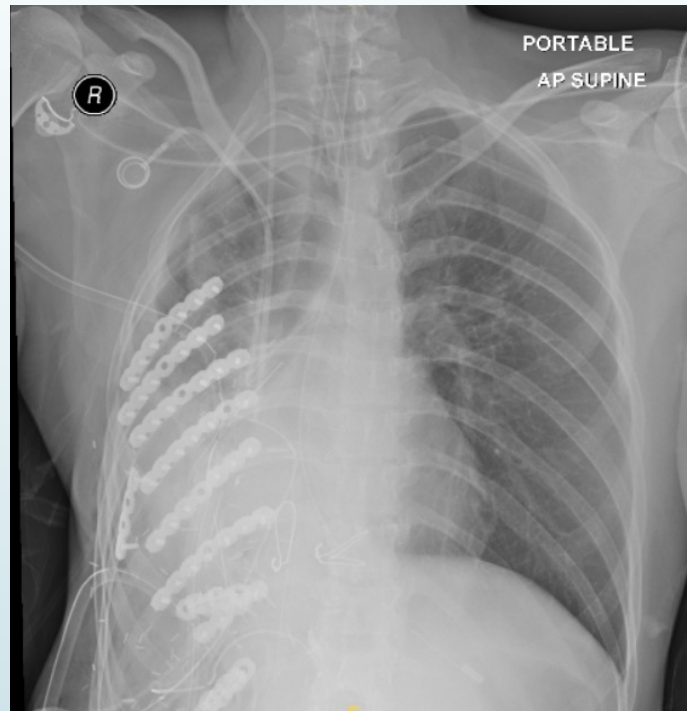
- Chest wall reconstruction with plating of posterior ribs



- Intra-operative specimen- post *en-bloc* resection of right pleural mass 25x25cm, weight 2.54 Kg

Case Presentation

- ▶ Patient recovery well without complications, discharge back home after hospitalization for a total of 1 week
- ▶ Post- Operative
 - ▶ Patient was underwent radiotherapy post-operatively.
 - ▶ CXR showed stable chest wall with expected post-operative right pleural effusion.



▶ CXR immediate post-operative




▶ CXR post-operative 2 months

Discussions

- ▶ International Registry of Lung Metastases (IRLM) has shown that pulmonary metastatectomy in soft tissue sarcomas can be performed with improved outcomes in selected patients
 - ▶ Longer disease-free interval (DFI)
 - ▶ Small number of nodules
 - ▶ Complete resection
- ▶ Multidiscipline teams' approach to maximize patient's outcome
 - ▶ Proper surgical planning
 - ▶ Guided by updated imaging scans
- ▶ U-Shape thoracotomy approach
 - ▶ Provides greatest exposure of surgical field
 - ▶ Facilitates and enable complete resection of tumour, especially in large tumour compressing on surrounding structures
- ▶ Early referral for radiotherapy
 - ▶ Aiming for curative of the disease



Conclusion

- ▶ **Complete surgical resection of tumour is the mainstay treatment for metastatic pleomorphic sarcoma.**
 - ▶ **A multidiscipline team approach is the key to achieve a complete R0 resection.**
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References

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