

# SELSTOC – Ultrasound features and progression

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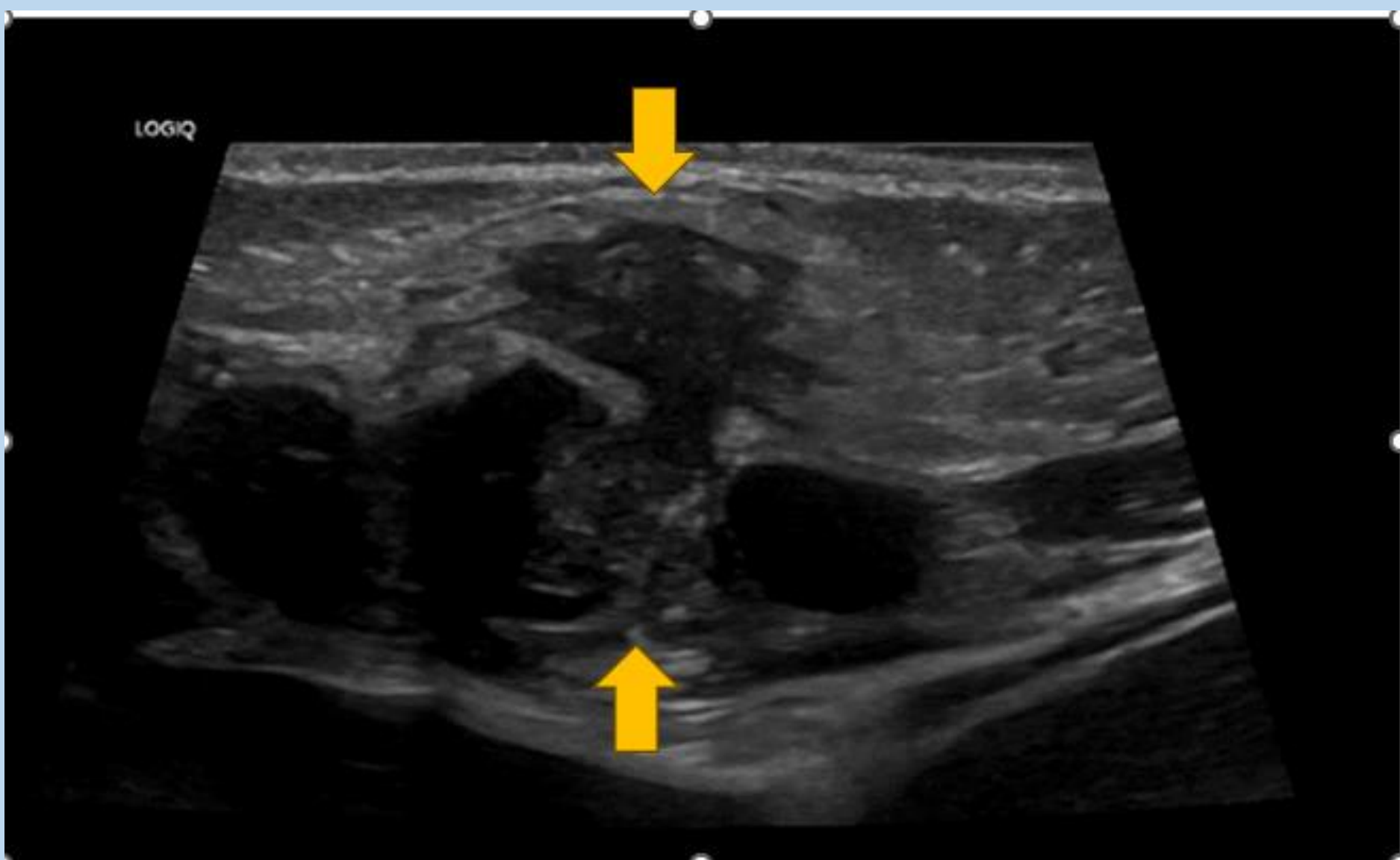
## Background

The sudden appearance and rapid growth of a soft tissue lesion on the chest in an infant is worrying for both parents and clinicians. With this clinical history and when there is no known history of trauma, cases may be referred onwards as a suspected cancer, with cross-sectional imaging and possible biopsy or surgical removal. Whereas when a diagnosis of a Self-limiting Sternal Tumor of childhood (SELSTOC) (1) has been made, watch and wait is used to monitor the lesion, until it can no longer be seen or felt (1,2). Images from two cases are compared to the expected features of a SELSTOC lesion (Table 1). The ultrasound images from these two cases are presented so that the progress over time can be seen.

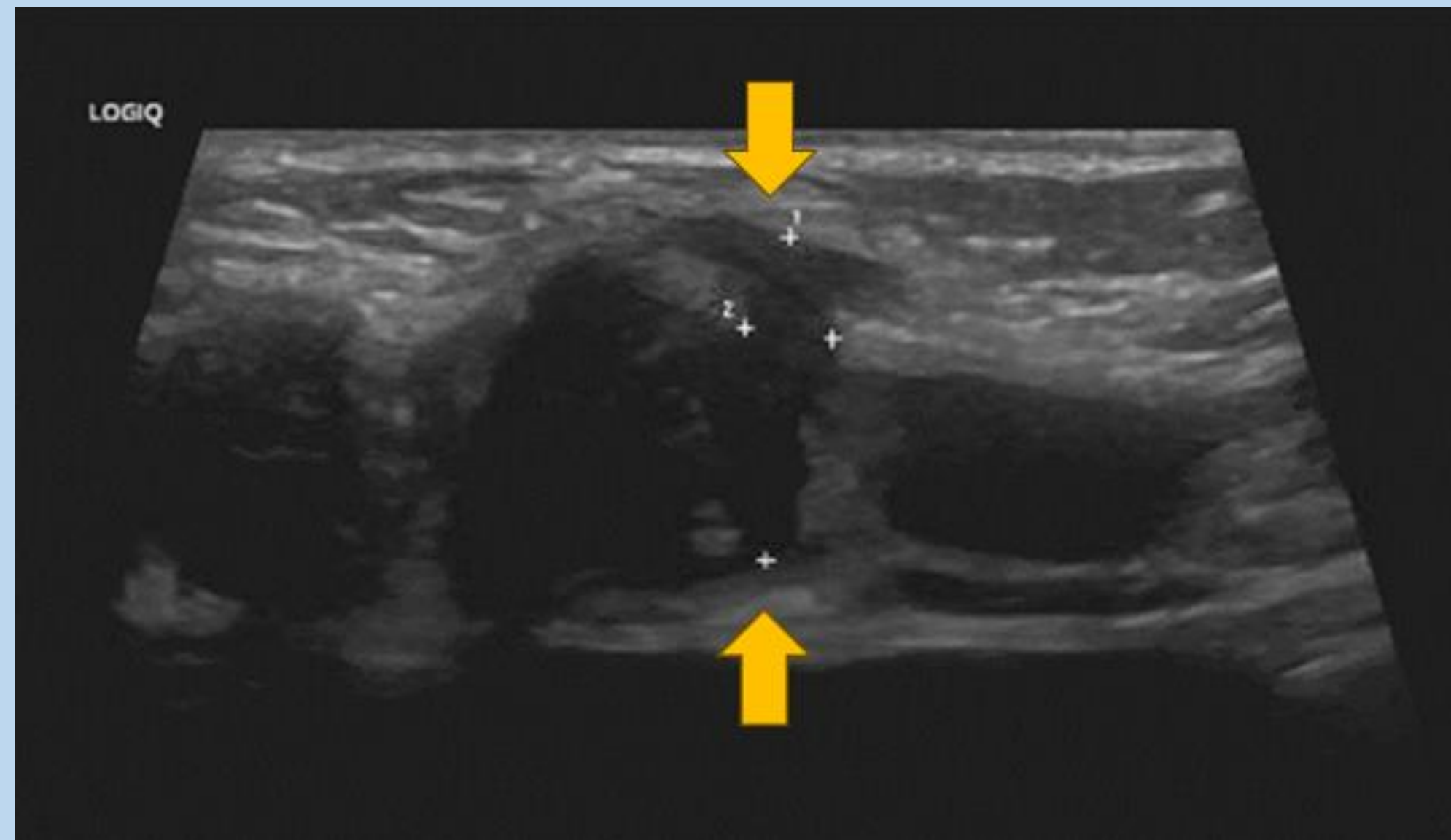
Table 1 Features present	Young age	Sternal location	Rapid growth	Dumbbell appearance on imaging	Inflammatory changes	Well child	No other abnormalities
Case 1	9 months	✓	✓	✓	✓	✓	✓
Case 2	12 months	✓	✓	x	✓	✓	✓

### Case 1

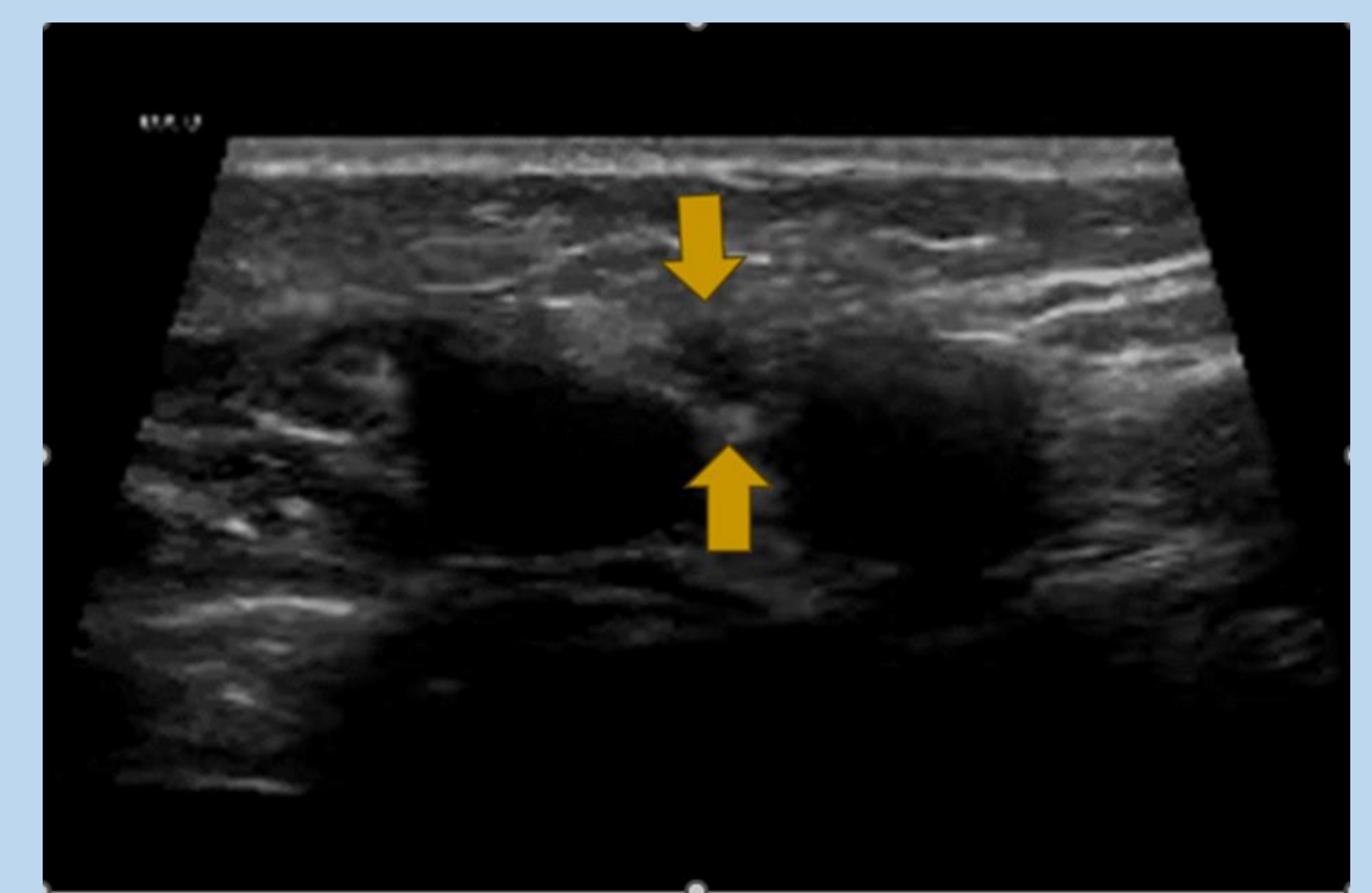
First scan 1.2cm (AP) X 0.8cm (TS)  
Palpable



2 weeks later 0.8cm (AP) x 0.2cm (TS)  
Palpable



6 weeks later 0.4cm (AP) x 0.3cm (TS)  
Non-palpable

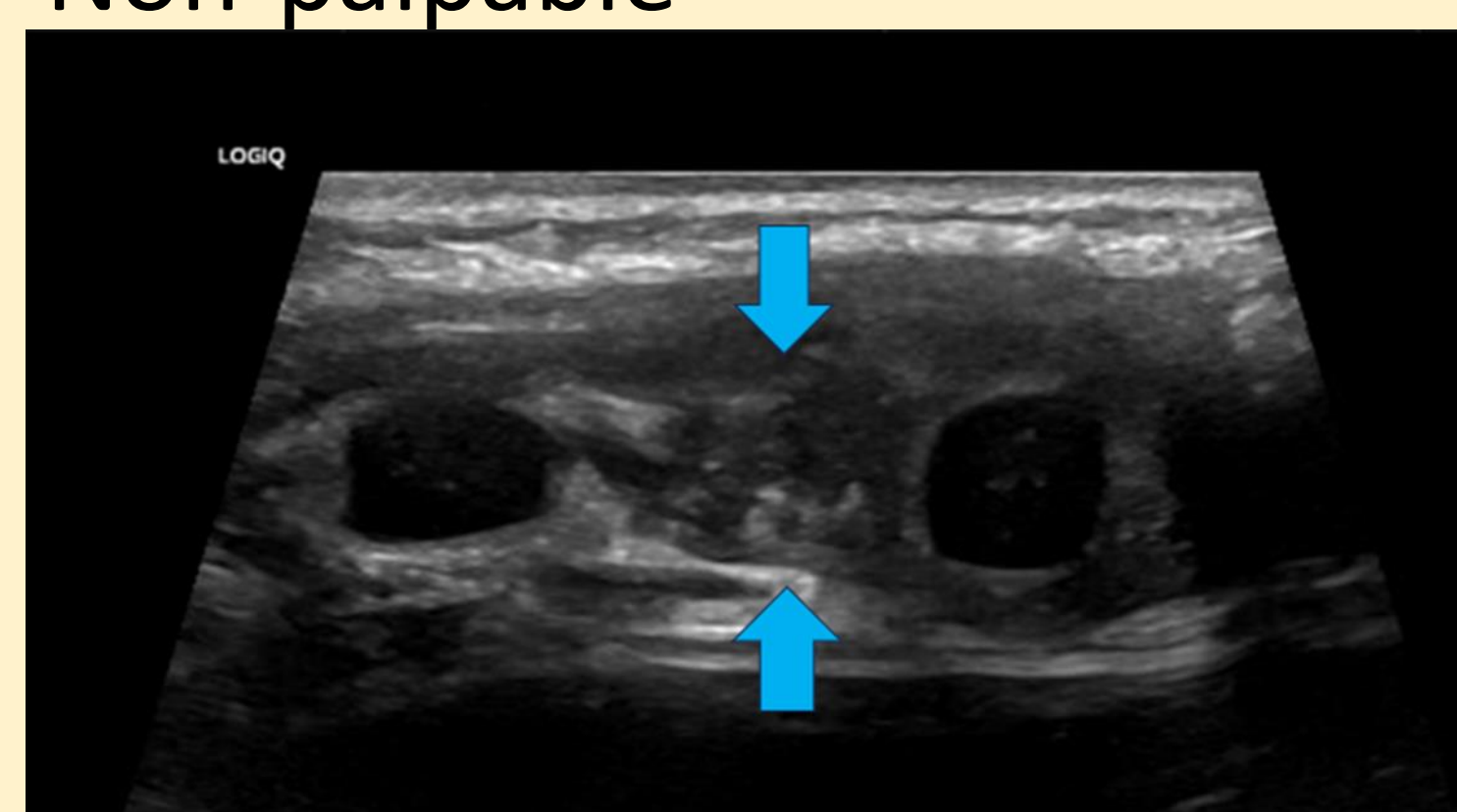


### Case 2

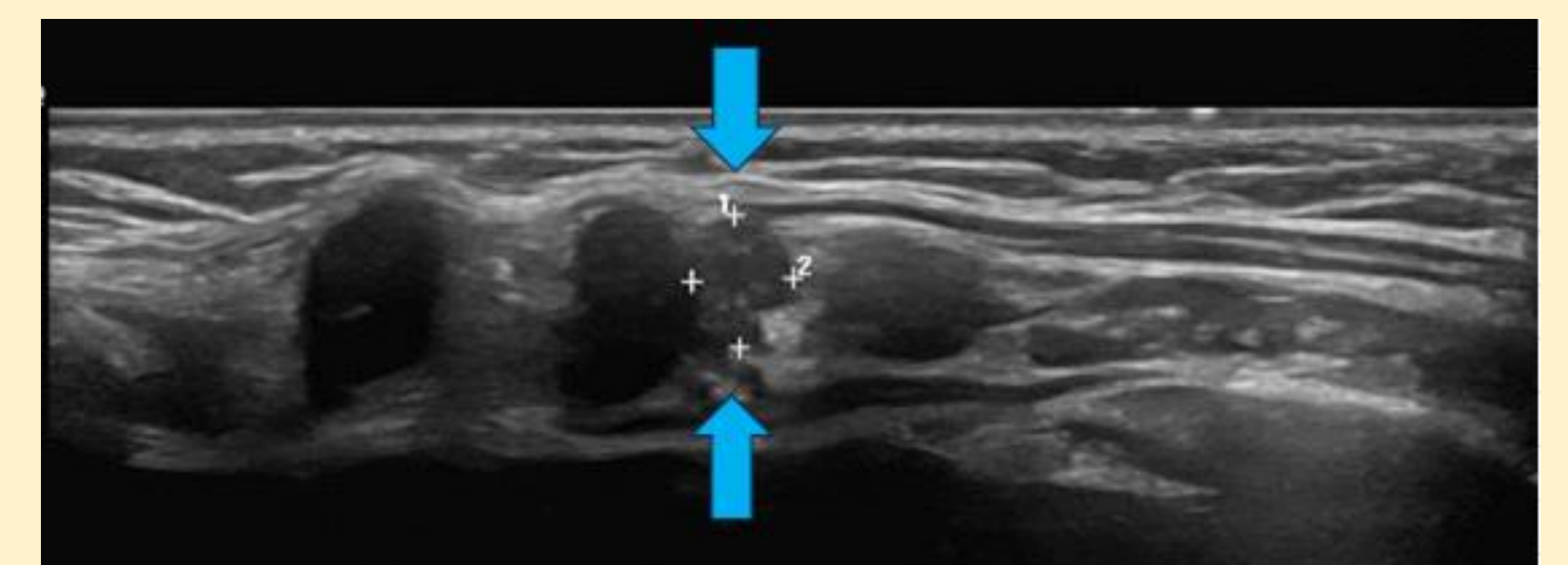
First scan 0.66cm (AP) x 0.75cm (TS)  
Non-palpable



2 weeks later (unchanged)  
Non-palpable



8 weeks later 0.4cm (AP) x 0.3cm (TS)  
Non-palpable



## Discussion

In both these cases, there was rapid growth of a sternal lump, with no history of trauma or illness. Both infants had an initial scan at their local hospital and were then referred to the Oncology department at this hospital, due to risk of sarcoma. The lesion in case 2 had already started to decrease in size at presentation at this tertiary centre and no longer appeared dumbbell in shape. The history and ultrasound appearances were recognized as SELSTOC (1) in both cases. Scans were performed until the lesions were no longer seen, resulting in one further ultrasound for case 1 and two further ultrasounds in case 2.

## Conclusion

When imaging sternal lesions in infants, ultrasound practitioners need to be aware of the ultrasound features of SELSTOC to prevent unnecessary worry and further investigations.

## References:

- te Winkel ML, Lequin MH, de Bruyn JR, van de Ven CP, de Krijger RR, Pieters R, et al. Self-limiting sternal tumors of childhood (SELSTOC). *Pediatr Blood Cancer* 2010;55:81-4.
- Moreira BL and Marchiori E. Self-limiting sternal tumor of childhood: A “do not touch” lesion. *J Pediatr*.2020;221:260-1.