

**A Practical Risk Stratification System Based on Ultrasonography and Clinical Characteristics for
Predicting the Malignancy of Soft Tissue Masses
ELECTRONIC SUPPLEMENTARY MATERIAL**

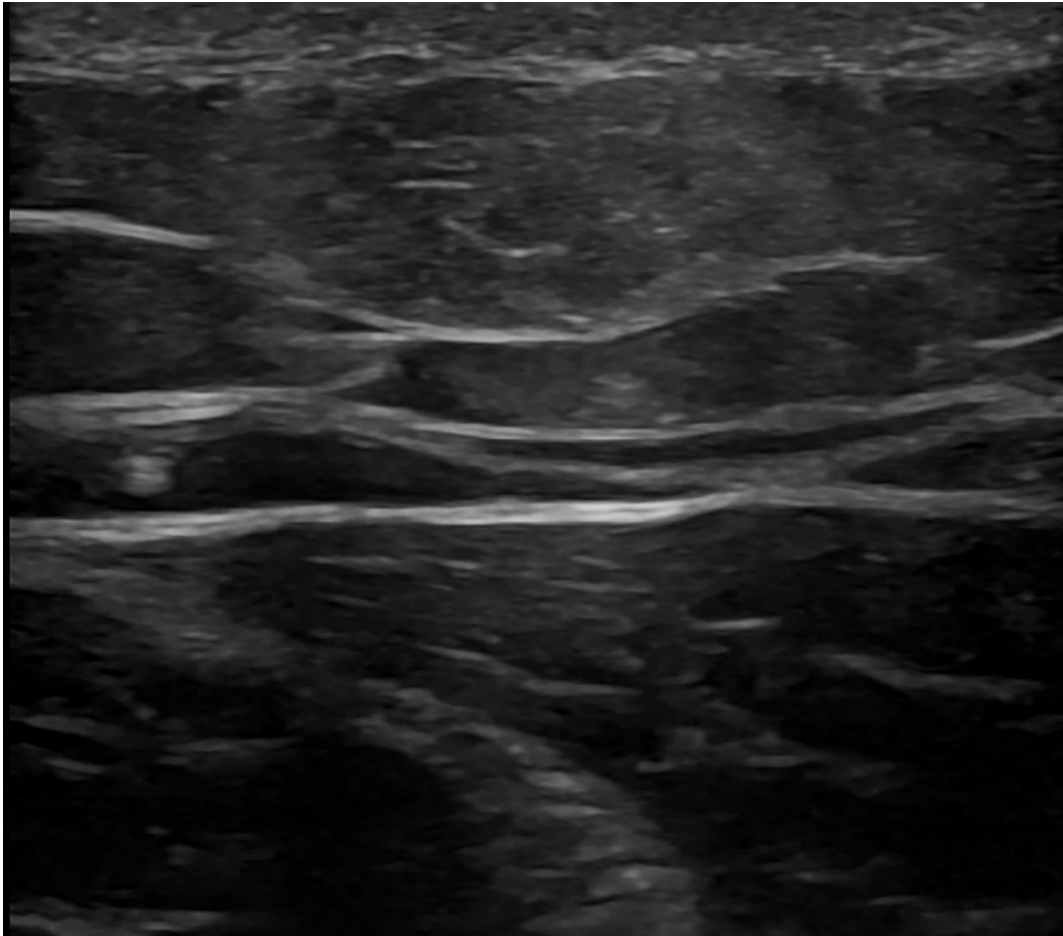
Supplementary Table 1. The inter-observer variability of US features in the training and validation sets.

Features	Training Set			Validation Set		
	Kappa	95% CI	Mass (n)	Kappa	95% CI	Mass (n)
Layer	0.851	0.562 - 1.000	50	0.959	0.865 - 1.000	50
Shape	0.960	0.872 - 1.000	50	0.891	0.703 - 1.000	50
Margin	0.840	0.676 - 0.960	50	0.769	0.516 - 0.947	50

Echogenicity	0.815	0.568 -	50	0.912	0.764 -	50
		1.000			1.000	
Composition	0.855	0.575 -	50	0.817	0.387 -	50
		1.000			1.000	
Calcification	0.855	0.588 -	50	0.912	0.631 -1.000	50
		1.000				
Bone Invasion	0.864	0.659 -	50	0.852	0.566 -	50
		1.000			1.000	
Vascularity	0.945	0.860 -	50	0.916	0.806 -	50
		1.000			1.000	

Note: CI, confidence interval; n, number; US, ultrasonography

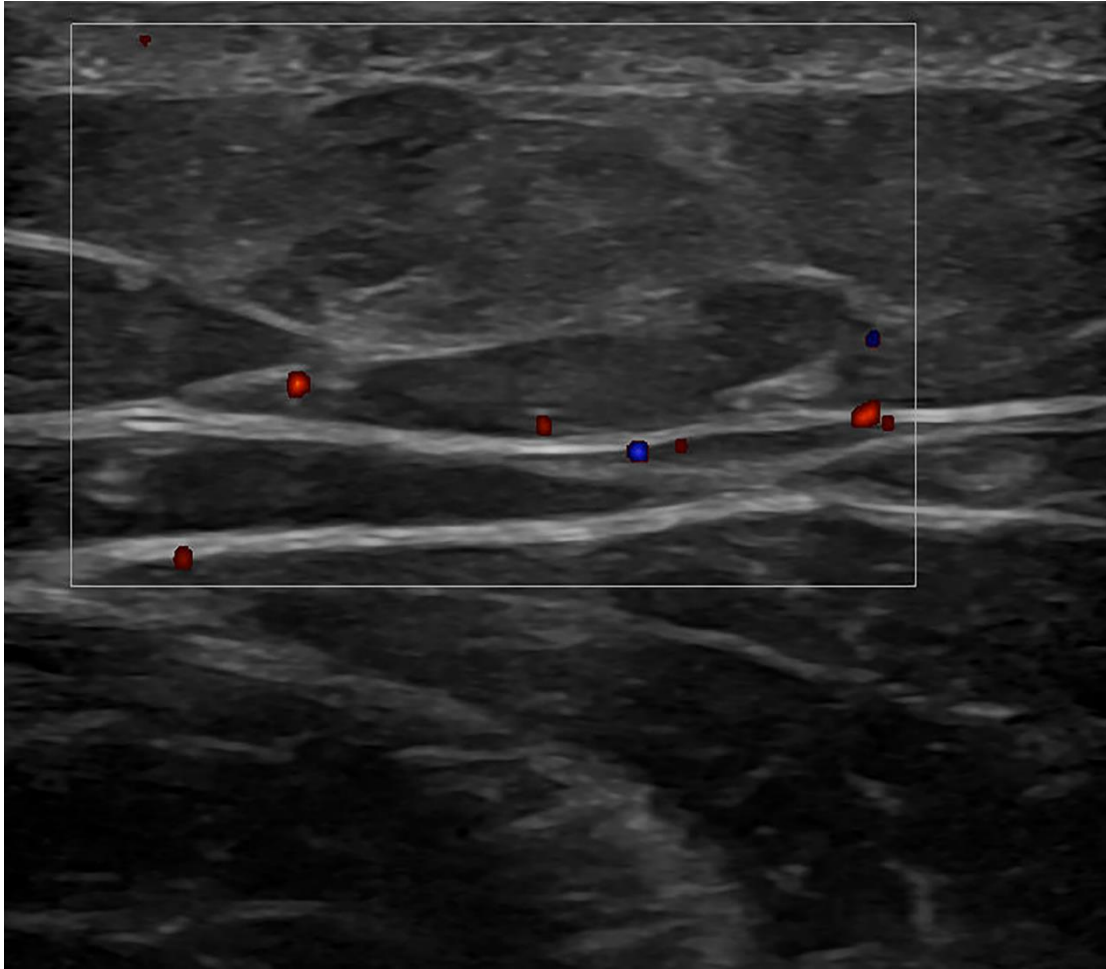
Supplementary Figure 1. A STM classified as RSS category 3. (a) The mass is predominantly hyperechoic with a regular shape,



a.

a mean maximum diameter of 1.4 cm, a well-defined margin, and no bone invasion. **(b)** The mass is avascular. The patient is a 43-year-old male with a duration of over 12 months and no history of malignancy. The total score is 2. Postoperative pathology identifies it as a lipoma.

Note: RSS, risk stratification system; STM, soft tissue mass



b.

Insights Imaging (2024) Zhang YL, Wu MJ, Hu Y, et al.

Supplementary Figure 2. A STM classified as RSS category 4A. (a) The mass is predominantly hypoechoic with an irregular shape, a mean maximum

diameter of 4.2 cm, a well-defined margin, and no bone

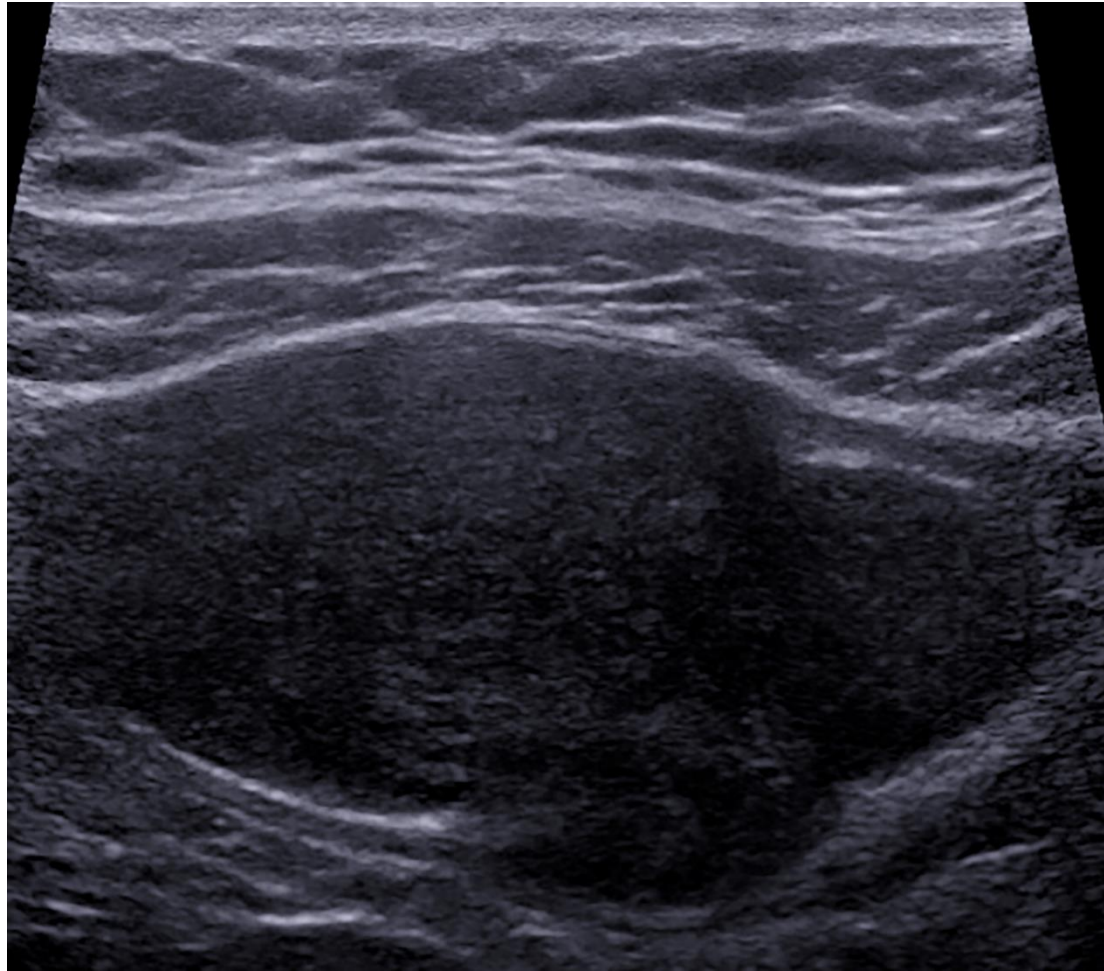
invasion. **(b)** The mass has a grade I vascularity. The patient

is a 38-year-old female with a duration of over 12 months and

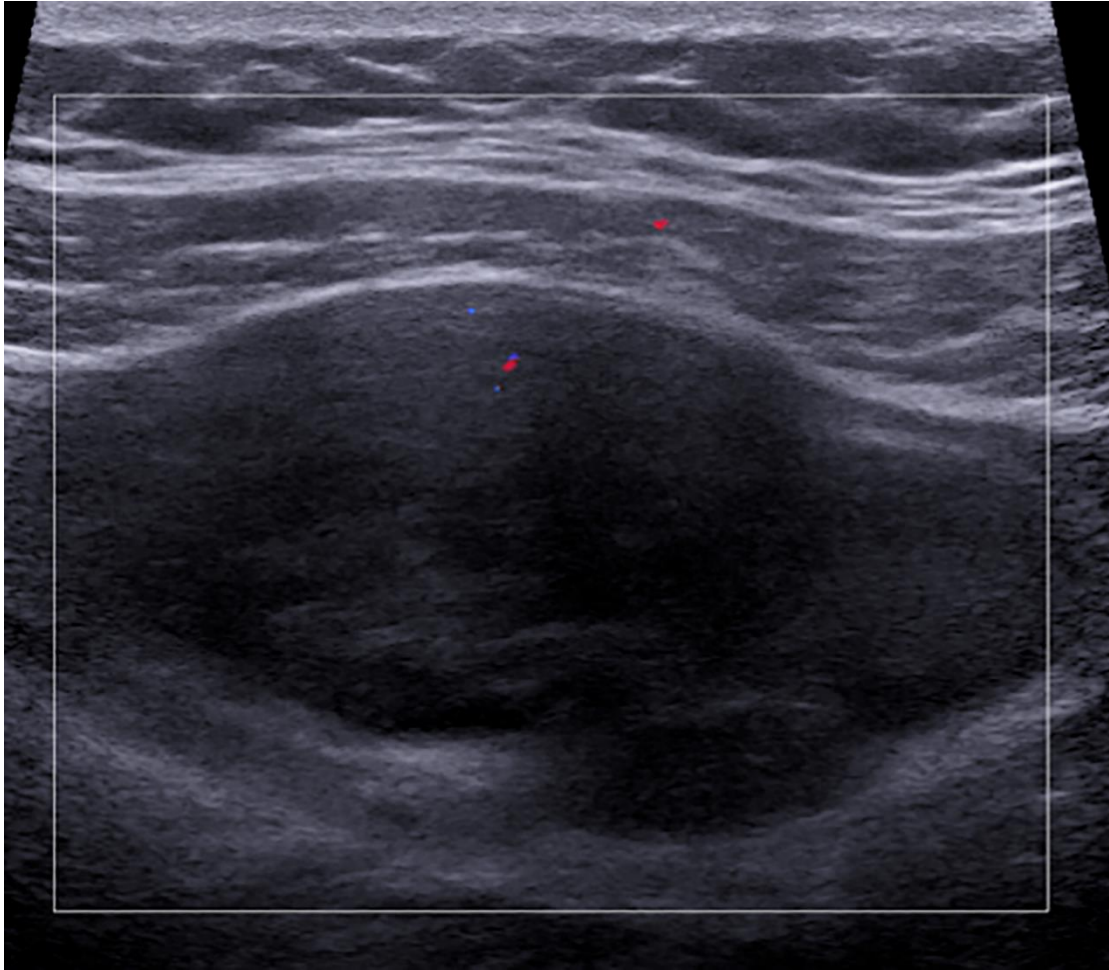
no history of malignancy. The total score is 5. Postoperative

pathology identifies it as a schwannoma.

Note: RSS, risk stratification system; STM, soft tissue mass

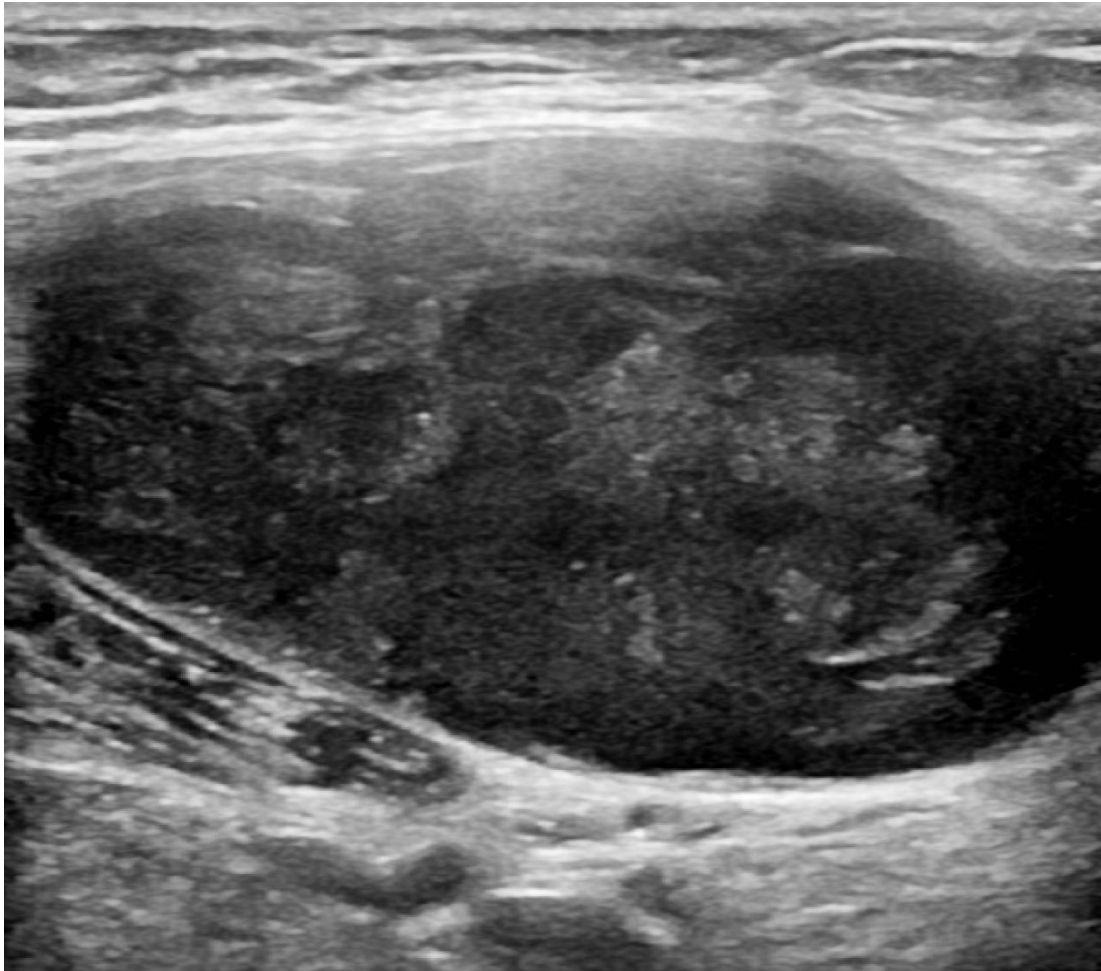


a.



b.

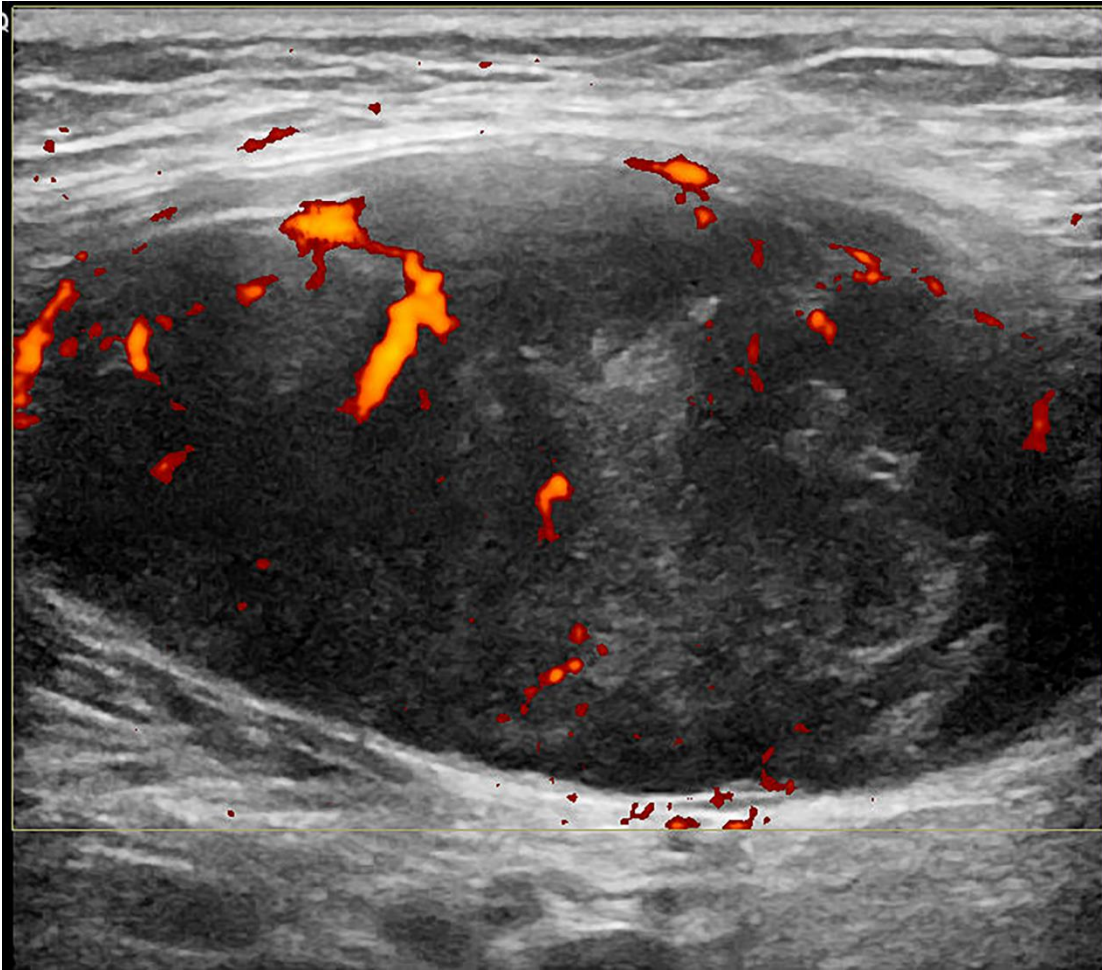
Supplementary Figure 3. A STM classified as RSS category 4B. (a) The mass is predominantly hypoechoic with a regular shape, a mean maximum diameter of 5.4 cm, a well-defined margin, and no bone invasion. **(b)** The mass has a grade III vascularity. The patient is a 43-year-old female with a duration of 20 days and no history of malignancy. The total score is 8. Postoperative pathology identifies it as a smooth muscle sarcoma.



a.

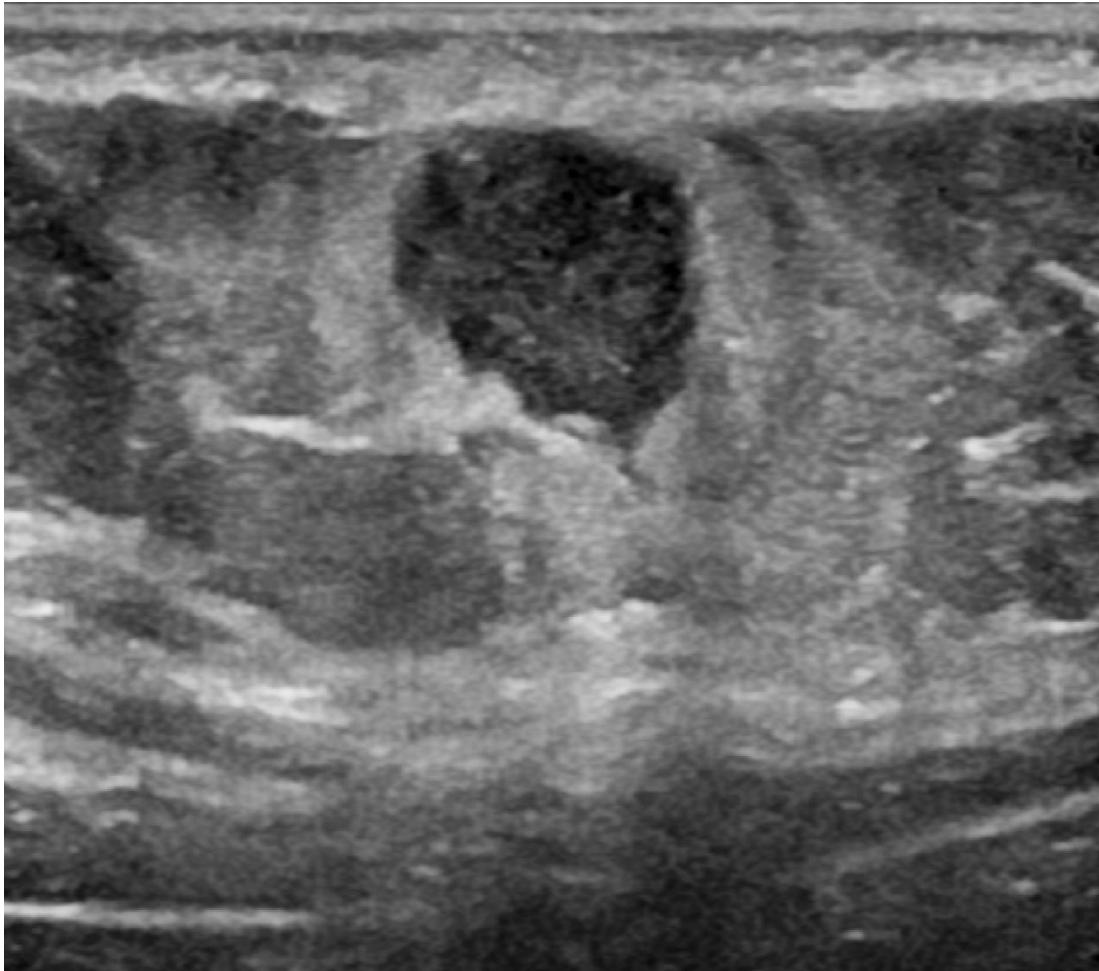
duration of 20 days and no history of malignancy. The total score is 8. Postoperative pathology identifies it as a smooth muscle sarcoma.

Note: RSS, risk stratification system; STM, soft tissue mass



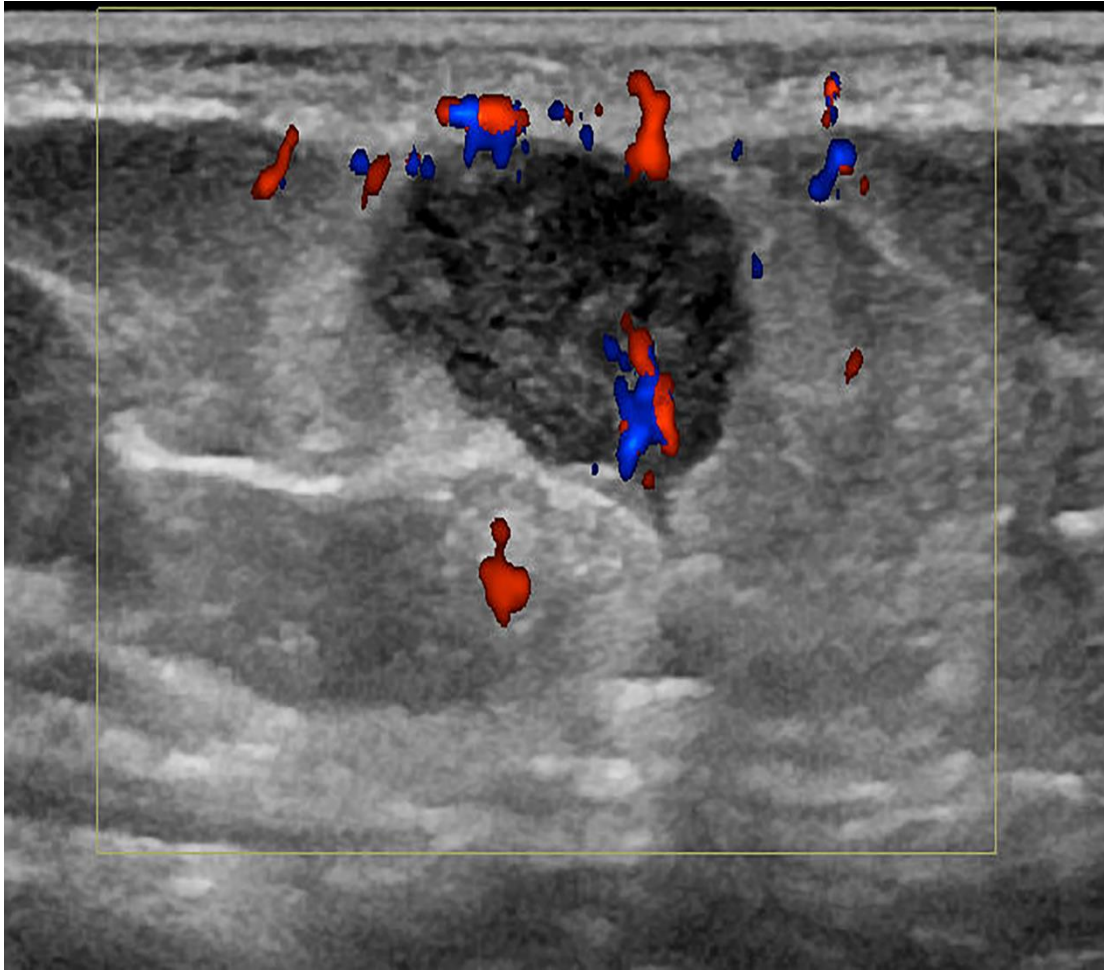
b.

Supplementary Figure 4. A STM classified as RSS category 5. (a) The mass is predominantly hypoechoic with a regular shape, a mean maximum diameter of 1.1 cm, an ill-defined margin, and no bone invasion. **(b)** The mass has a grade III vascularity. The patient is a 61-year-old female with a duration of 10 days and a history of malignancy. The total score is 12. Postoperative pathology identifies it as a metastatic carcinoma.



duration of 10 days and a history of malignancy. The total score is 12. Postoperative pathology identifies it as a metastatic carcinoma.

Note: RSS, risk stratification system; STM, soft tissue mass



b.