

EP18.07. Diagnostic uncertainty, surgical timing and ovarian preservation in suspected ovarian torsion: findings from a real-world ultrasound cohort

Dr Molly Donovan^{1,2} , Dr Tin Hnin Aye¹, Dr Dilani Manuel¹
Leeds Teaching Hospitals NHS Trust, Leeds, UK • Leeds Community Healthcare NHS Trust, Leeds, UK

Objectives

To evaluate the real-world performance of ultrasound in suspected ovarian torsion and to explore whether ultrasound reporting influences time to surgery and ovarian preservation.

Method

Retrospective cohort study of patients aged ≥16 years undergoing emergency laparoscopy for suspected ovarian torsion at a UK tertiary centre (May 2022 – May 2025). Operative findings were the reference standard. Pre-operative ultrasound reports were classified as suggestive, indeterminate, or not suggestive of torsion; indeterminate scans were classified as negative for diagnostic accuracy analysis. Time from presentation and from gynaecological review to surgery was compared (median, IQR) between ovarian preservation and oophorectomy.

Results

- Torsion confirmed in **40/54 cases (74%)**
- Ultrasound was the most common imaging method (**29/54; 54%**)
- Only **38% of ultrasounds** were suggestive; **59% were indeterminate**
- Ultrasound had **low sensitivity (50%)** but **high specificity (89%)**
- Ovarian preservation achieved in **75% of confirmed cases**
- Preservation was associated with a **shorter presentation-to-theatre time** (15.5 vs 25.0 hours; $p = 0.032$)
- Suggestive ultrasound findings led to a **shorter review-to-theatre interval** (4.4 vs 15.9 hours; $p = 0.016$)

Conclusion

Ultrasound is frequently indeterminate in suspected ovarian torsion in real world practice; however, suggestive findings are associated with shorter time to surgery. Longer time to theatre is associated with reduced ovarian preservation. Ultrasound findings should be interpreted alongside clinical suspicion to support urgent surgical management.

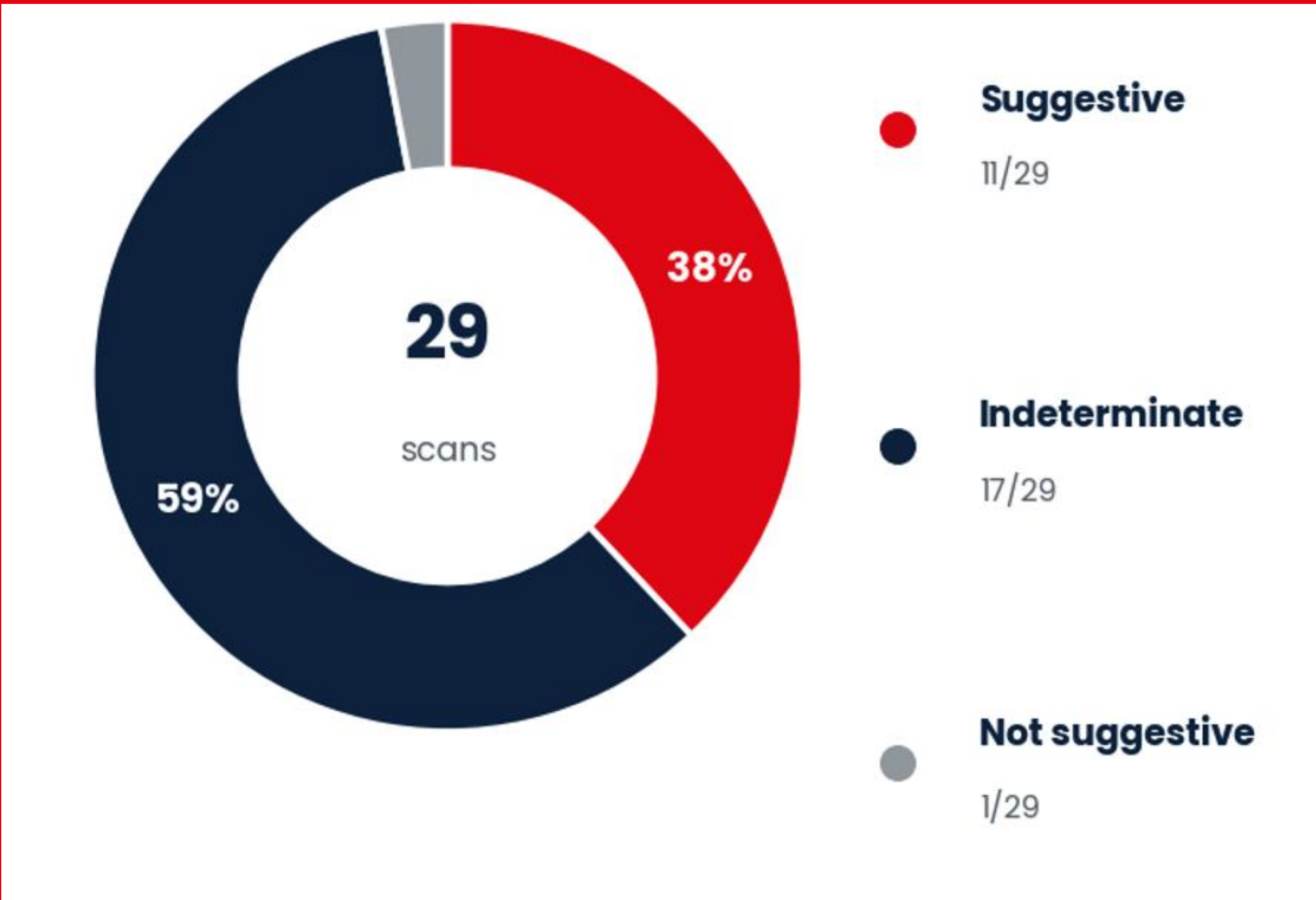


Figure 1. pre-operative ultrasound classification

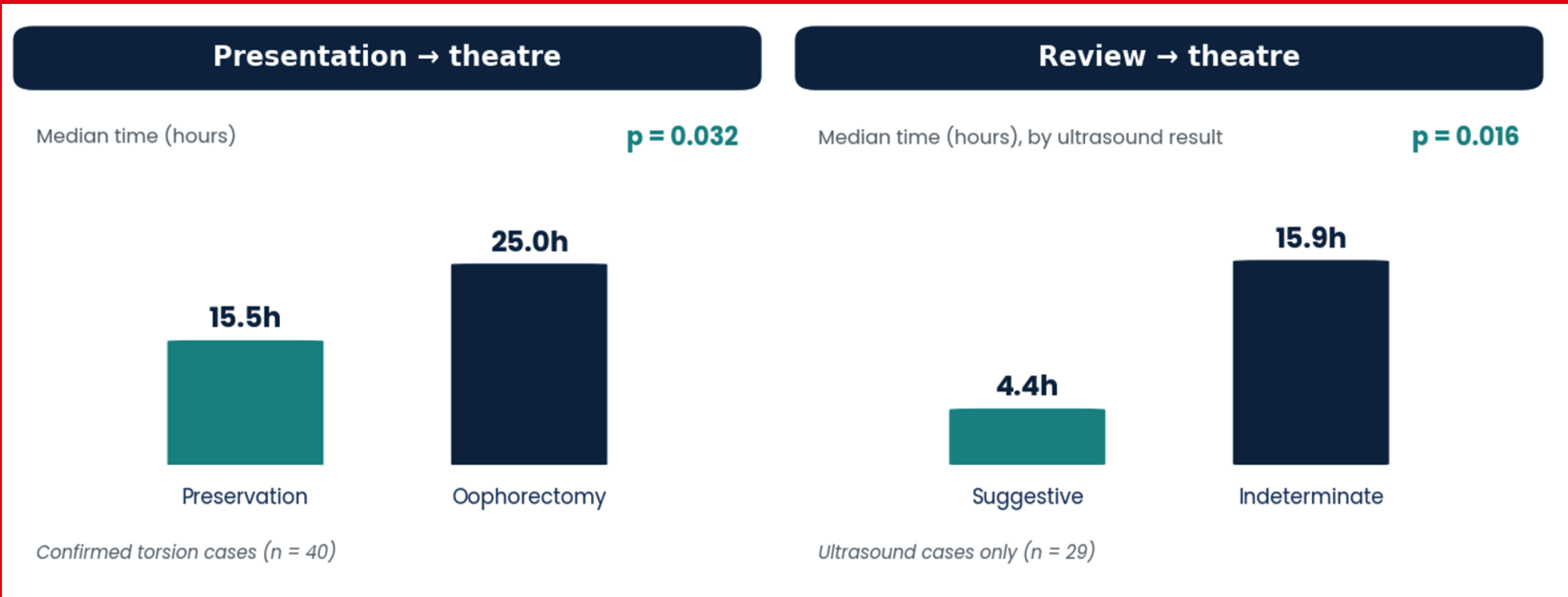


Figure 2. Time to theatre by surgical outcome and by ultrasound classification.

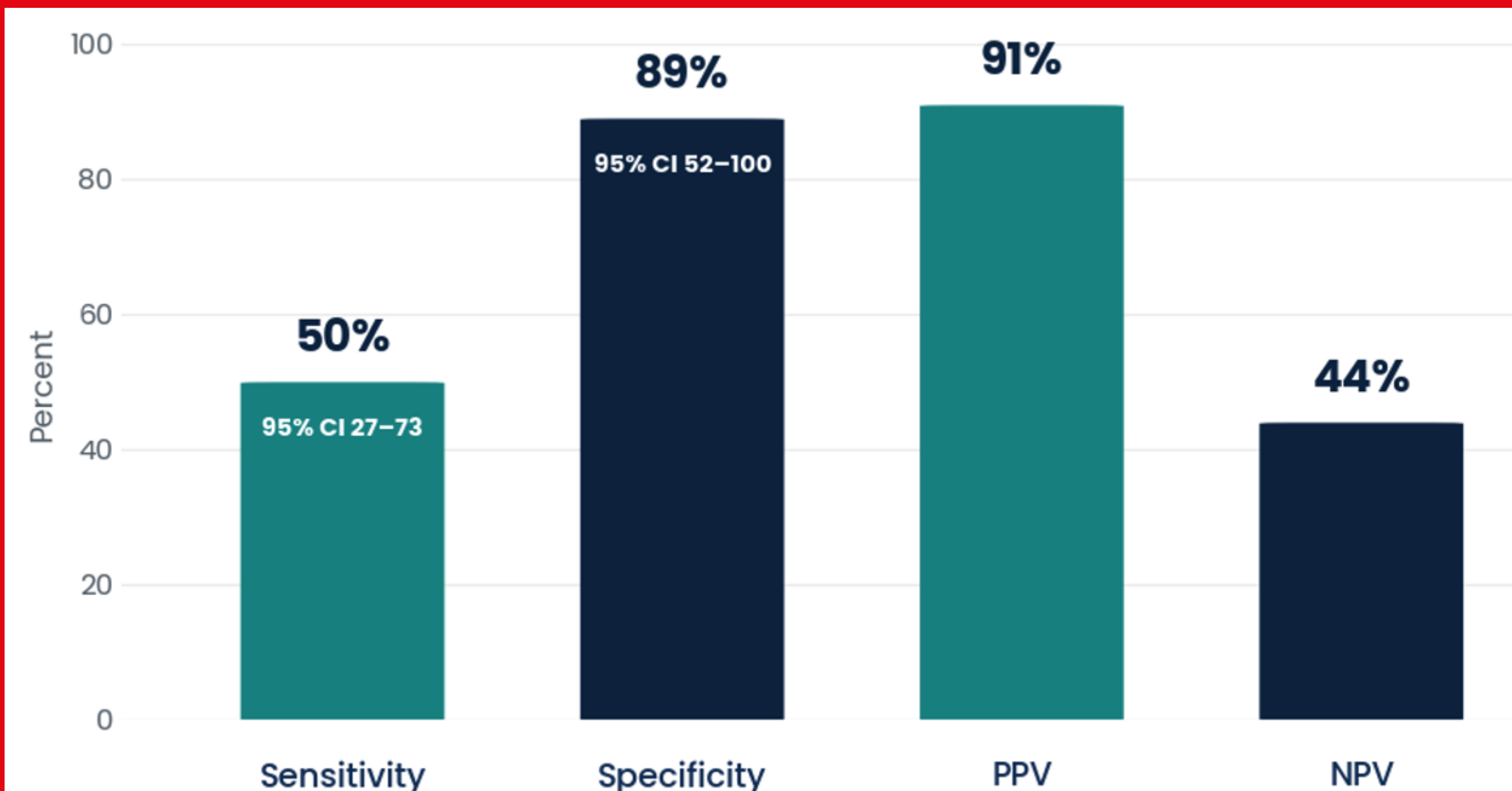


Figure 3. Diagnostic performance of ultrasound for suspected ovarian torsion.