

Sonographic detection and morphology description of tubal ectopic pregnancies did not improve after national guideline implementation

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BACKGROUND

Structured preoperative ultrasound assessment of tubal ectopic pregnancy is central to management planning. In 2023, Norwegian guidelines were revised to align with ESHRE recommendations on morphology description. Whether **sonographic detection** and **reporting quality** changed after guideline implementation remained unknown.

OBJECTIVES

To describe **detection rates** and **ultrasound morphology** of tubal ectopic pregnancy and assess whether reporting changed after the 2023 guideline.

METHODS

Design: Historical cohort, tertiary university hospital without dedicated early pregnancy unit

Cohort: 457 women operated for tubal ectopic pregnancy, 2018 and 2022–2025

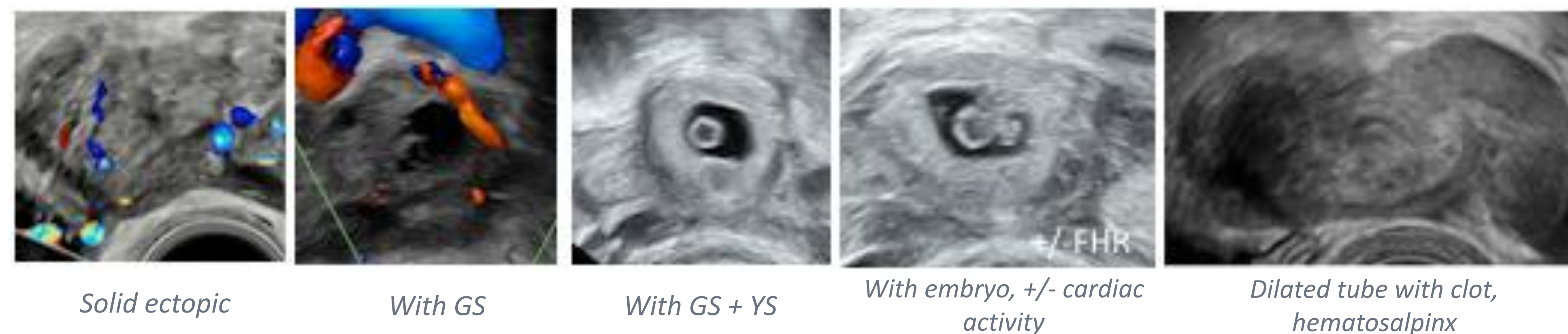
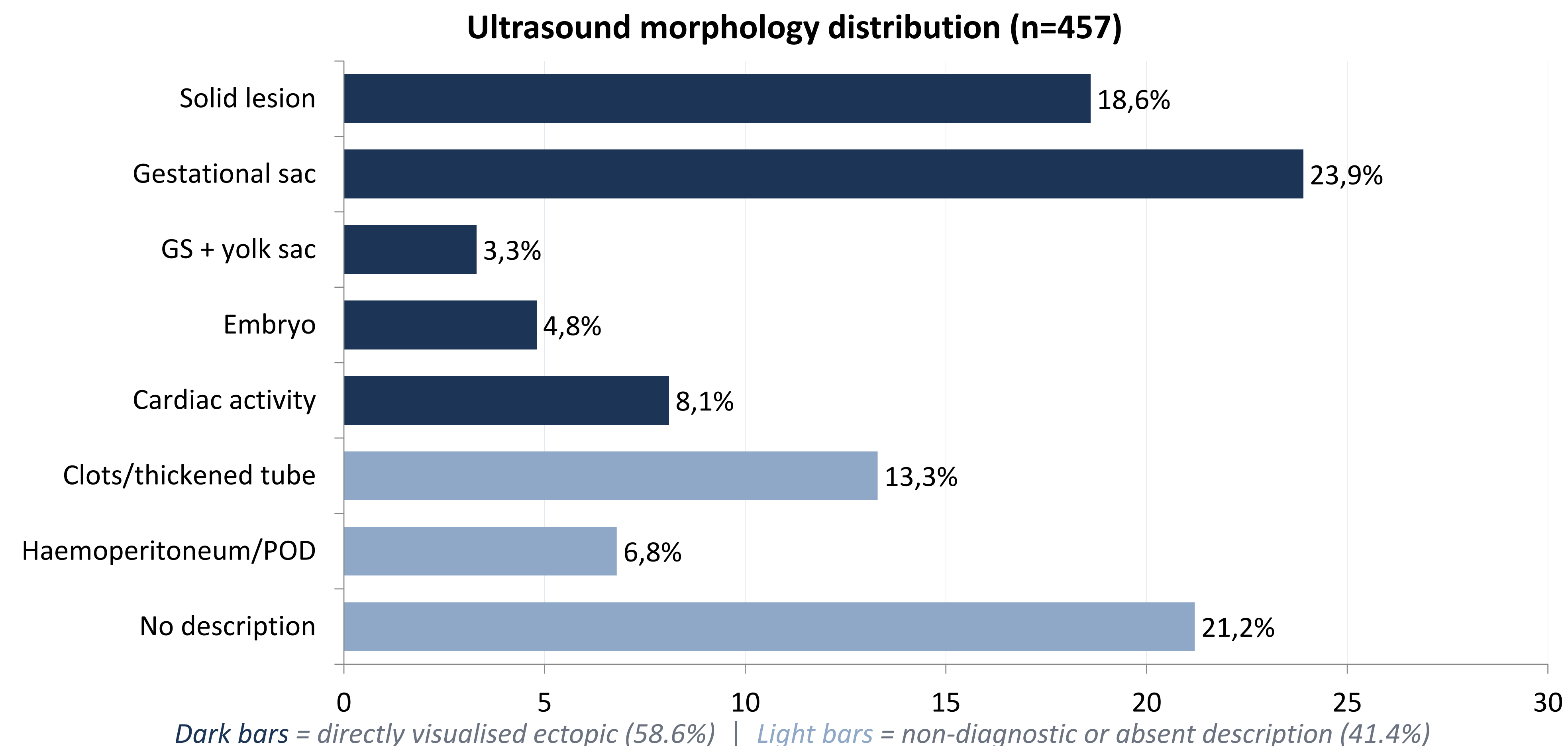
Morphology coding: 8 categories (solid lesion, gestational sac, GS+yolk sac, embryo, embryo w cardiac activity, clots in tube, haemoperitoneum/POD, no description)

Outcomes: Prevalence of morphology type and change over time; ectopic size documentation; intraoperative blood loss, preoperative hCG

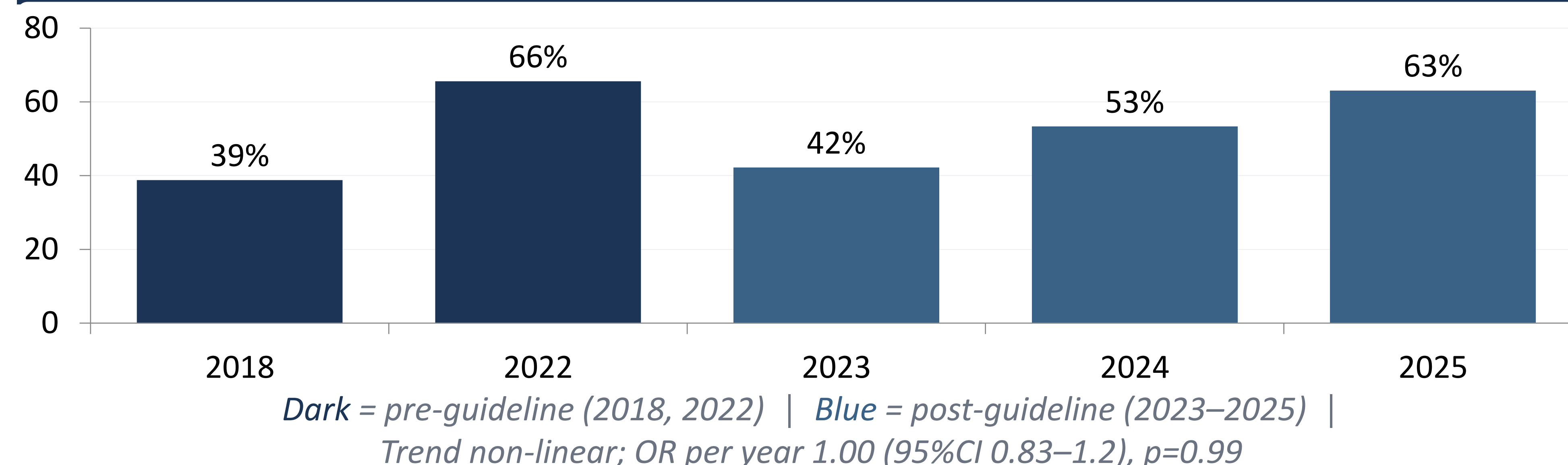
Statistics: Cochran-Armitage trend test, Kruskal-Wallis, Spearman's rho,

Ethics: IRB approved (Nr 25/20761)

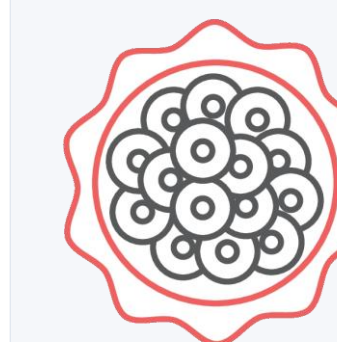
RESULTS



ECTOPIC SIZE REPORTING BY YEAR

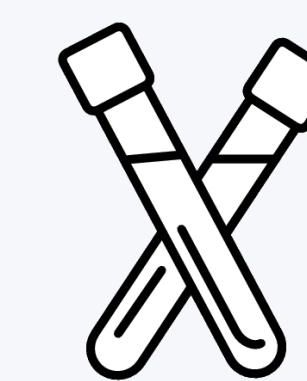


KEY FINDINGS



Morphology distribution

No significant change across years after Holm correction. Gestational sac most common (24%), followed by no description (21%).



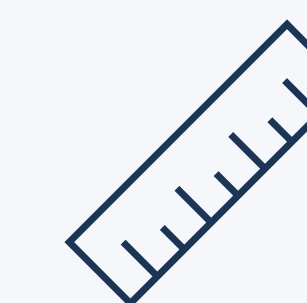
hCG and detection

Preoperative hCG correlated with morphological advancement ($\rho=0.38$, $p<0.001$), but hCG was not significantly lower in the no-description group vs directly visualised categories — lower hCG alone did not explain failure to detect.



Blood loss

Haemoperitoneum was associated with markedly higher intraoperative blood loss (650 vs 300 mL, $p=0.004$) and lower preoperative haemoglobin.



Size reporting

Increased over the study period, but trend was non-linear and measurements frequently included surrounding clots rather than the ectopic itself.

CONCLUSIONS

- Sonographic morphology reporting did not improve after guideline introduction.
- Failure to identify ectopic tissue was not explained by lower hCG.
- Size reporting increased but remained inconsistent and often methodologically inadequate.
- Guideline publication alone is insufficient.**
- Systematic early pregnancy ultrasound training is needed to improve diagnostic quality.**