

Table 1. Characteristics and main findings of the studies included in this review				
Study (Author, Year)	Study design	Sample size	Comparator / Reference standard	Main outcomes
Emanuel et al (2012)	Prospective observational cohort	73 women	HSG if inconclusive	Highly successful, low discordance with HSG, 19% pregnancy
Dreyer et al (2014)	Randomized controlled trial	40 women	HSG	Lower pain, shorter time
Dreyer et al (2015)	Prospective diagnostic accuracy study	26 women with Essure® device (38 tubes)	HSG	Similar ability to confirm tubal occlusion, lower pain, shorter time
Ludwin et al (2017)	Prospective observational study	132 women (259 tubes)	Laparoscopy & HyCoSy	Significantly higher PPV, fewer inconclusive results, similar NPV
Ramos et al (2021)	Prospective diagnostic accuracy study	106 women	HSG	Concordance with HSG, lower pain
Melcer et al (2021)	Systematic review & meta-analysis	6 studies (622 tubes)	Laparoscopy/HSG	Accurate test for tubal occlusion -on a par with standards tests
van Welie et al (2022)	Multicenter randomized study	1026 women	HSG	Similar live birth outcomes, lower pain
Engels et al (2023)	Multicenter prospective study	799 women	—	Spontaneous pregnancy for 1 in 4 patients within 12 months
Kamphuis et al (2024)	Economic evaluation with RCT	1160 women	HSG	Comparable outcomes, lower costs
Le et al (2024)	Prospective diagnostic accuracy study	447 women (868 tubes)	Laparoscopy	Reliable patency test, no adverse events, VAS scores of no pain
Xydias et al (2025)	Systematic review & meta-analysis	9 studies	HSG/HyCoSy	Moderate concordance with HSG, diagnostically superior to HyCoSy, better tolerability
Abbreviations: HyFoSy = hysterosalpingo-foam sonography; HSG = hysterosalpingography; HyCoSy = hysterosalpingo-contrast sonography; VAS = visual analogue scale; PPV = positive predictive value; NPV = negative predictive value.				