Table 1. Characteristics of included studies

Study	Participants	Comparison	Follow-up	Outcome measures	Comments	Risk of bias (per outcome measure) *
Included in syste	matic review Wang, 2020					
Alper, 1986	N at baseline Intervention: 58 Control: 73	Intervention: oil-soluble contrast media ethiodol Control: water-soluble contrast media Renographin	6 months	Clinical pregnancy, intravasation, procedural pain	Source of funding not stated.	All outcomes: unclear
	Age (mean, SD) Intervention: 29.1 years (SD=2.9) Control: 29.3 years (SD=4.6)					
De Boer, 1988	N at baseline Intervention: 87 Control: 88 Age (mean, SD): 29 years (19 to 44).	Intervention: oil-soluble contrast media ethiodol Control: water-soluble contrast media iopamidol	6 months	Clinical pregnancy	Source of funding not stated	All outcomes: unclear
Dreyer, 2017	N at baseline Intervention: 557 Control: 562	Intervention: oil-soluble contrast media lipiodol Control: water-soluble contrast media telebrix hystero	6 months	Live birth, intravasation, clinical pregnancy, miscarriage, ectopic pregnancy	Source of funding by VU University Medical Centre	Low risk (all outcomes)

	Age (mean, SD) Intervention: 32.8 years Control: 33 years					
Lindequist, 1994	N at baseline Intervention: Control: Age (mean, SD) Intervention: 29.9 years (21 to 43) Control: 29.5 years (20 to 40)	Intervention: oil-soluble contrast media lipiodol Control: water-soluble contrast media iotrolan	20 to 39 months	Intravasation, clinical pregnancy, procedural pain, infection	Source of funding: Schering, Copenhagen, Denmark (for the free delivery of iotrolan used in this study).	All outcomes: unclear
Rasmussen, 1991	N at baseline Intervention: 98 Control: 300 Age (mean, SD): not stated	Intervention: oil-soluble contrast media lipiodol Control: water-soluble contrast media iohexol, loxaglate, or diatrizoate	9 months	Live birth, intravasation, clinical pregnancy, procedural pain, infection	Source of funding: Nycomed AS, Oslo (free delivery of Omnipaque used in this study).	All outcomes: unclear
Spring, 2000	N at baseline Intervention: 273 Control: 260	Intervention: oil-soluble contrast media ethiodol Control: water-soluble contrast media diatrizoate and iodipamide	12 months	Live birth, clinical pregnancy, miscarriage, ectopic pregnancy	Supported in part by Kaiser Permanente Medical Care Program- Northern California Innovation Project grant no. 930198	All outcomes: unclear

Individual studies Zhang, 2022	Age (mean, SD) Intervention: 29.1 years (SD 2.9) Control: 29.3 years (SD 4.6) N at baseline Intervention: 508 Control: 518 Age (mean, SD) Intervention: 30.5 ± 3.7 years Control: 30.8 ± 3.6 years	Intervention: ethiodized poppyseed oil Control: Iohexol, Iopromide, or Ioverol	At least 2 months Follow-up was conducted every 3 months through telephone until the endpoint of the follow-up (including the end of the study, live birth, miscarriage, or patient	Clinical pregnancy, ongoing pregnancy, live birth, miscarriage, time to pregnancy, adverse events (pain, fever)	No funding was received. All other authors declare no competing interests	Some concerns (clinical pregnancy, ongoing pregnancy, live birth, miscarriage, time to pregnancy) HIGH (pain, fever)
Van Rijswijk, 2018 (economic evaluation of the H2Oil trial)	N at baseline Intervention: 557 Control: 562 Data were reported on 554 women in each group.	See Dreyer (2017)	death) 6 months	Direct medical costs of the intervention, infertility treatments and miscarriage within 6 months of randomization (in US dollars). As additional analysis: direct medical costs	Partially funded by Guerbet, Paris, France.	Some concerns (all outcomes)

				related to pregnancy and delivery to assess the costs made to achieve a live birth.		
Van Welie, 2020 (secondary analysis H2Oil trial, 3 year follow-up)	N at baseline Intervention: 550 Control: 557	See Dreyer (2017)	3 years	Ongoing pregnancy over 3 years of follow-up	The H2Oil study (NTR 3270) was an investigator-initiated study that was funded by the two academic institutions (AMC and VUmc) of the Amsterdam UMC, the Netherlands. The follow-up study (NTR 6577) was also an investigator-initiated study with funding by Guerbet, France. The funders had no role in study design, collection, analysis or interpretation of the data.^	Some concerns (all outcomes)
Van Rijswijk, 2020 (secondary analysis H2Oil trial, 5 year follow-up)	N at baseline Intervention: 555 Control: 559	See Dreyer (2017)	5 years	Ongoing pregnancy, live births, time to pregnancy, number of couples starting fertility treatment after hystero -salpingography, miscarriage, ectopic pregnancy (all at 5-years)	^Please refer to information described above.	Some concerns (all outcomes)
Van Welie, 2021 (economic evaluation of the long-term	N at baseline Intervention: 557 Control: 562	See Dreyer (2017)	5 years	The primary outcome is first ongoing pregnancy leading to live birth (including total direct medical costs, i.e. costs for the contrast medium	^Please refer to information described above.	Some concerns (all outcomes)

effects of the H2Oil trial)	Data were reported on 555 women in the intervention group and 559 women in the control group.			intervention and infertility treatments and miscarriage in the 5 years since randomization). As additional analysis: direct medical costs related to pregnancy and delivery associated with achieving a live birth.		
Van Welie, 2020a (retrospective analysis of the H2Oil trial)	N at baseline Intervention: 76 Control: 64	See Dreyer (2017)	Not applicable	Neonatal thyroid function	This study did not receive any funding. ^Please refer to information described above.	Some concerns (neonatal thyroid function)

^{*}For further details, see risk of bias table in the appendix