

## Supplementary Text S1

### Systematic search strings

**Pubmed (466 records – 23/01/2024)**

```
((("Ovary"[MeSH Terms] OR "ovar*"[Title/Abstract] OR "gonad*"[Title/Abstract]) AND  
("Neoplasms"[MeSH Terms] OR "tumor*"[Title/Abstract] OR "tumour*"[Title/Abstract] OR  
"neoplasm*"[Title/Abstract] OR "carcinom*"[Title/Abstract] OR "cancer*"[Title/Abstract] OR  
"sarcom*"[Title/Abstract] OR "cystadenom*"[Title/Abstract] OR "papillom*"[Title/Abstract] OR  
"adenofibroma*"[Title/Abstract] OR "cystadenofibroma*"[Title/Abstract] OR  
"adenocarcinom*"[Title/Abstract] OR "adenom*"[Title/Abstract])) OR ((("epithelial*"[Title/Abstract]  
OR "serous*"[Title/Abstract] OR "brenner*"[Title/Abstract] OR "clear cell*"[Title/Abstract] OR  
"seromucinous*"[Title/Abstract] OR "endometrioid*"[Title/Abstract] OR "mucinous*"[Title/Abstract]  
OR "mesenchym*"[Title/Abstract] OR "germ cell*"[Title/Abstract] OR  
"miscellaneous*"[Title/Abstract] OR "mesonephric*"[Title/Abstract] OR  
"undifferentiated*"[Title/Abstract] OR "dedifferentiated*"[Title/Abstract] OR "mixed  
cell*"[Title/Abstract] OR "smooth muscle*"[Title/Abstract] OR "mixed epithelial and  
mesenchymal*"[Title/Abstract] OR "germ cell*"[Title/Abstract] OR "yolk sac*"[Title/Abstract] OR  
"embryonal*"[Title/Abstract] OR "chorio*"[Title/Abstract] OR "mixed germ cell*"[Title/Abstract] OR  
"struma ovary*"[Title/Abstract] OR "stromal*"[Title/Abstract] OR "germ cell sex cord  
stromal*"[Title/Abstract] OR "germ cell sex cord stromal*"[Title/Abstract] OR  
"gonadoblastom*"[Title/Abstract] OR "undifferentiated gonadal tissue*"[Title/Abstract] OR  
"miscellaneous*"[Title/Abstract] OR "rete ovar*"[Title/Abstract] OR "wolff*"[Title/Abstract] OR  
"solid pseudopapill*"[Title/Abstract] OR "small cell*"[Title/Abstract] OR "wilms*"[Title/Abstract]))  
AND ("Neoplasms"[MeSH Terms] OR "tumor*"[Title/Abstract] OR "tumour*"[Title/Abstract] OR  
"neoplasm*"[Title/Abstract] OR "carcinom*"[Title/Abstract] OR "cancer*"[Title/Abstract] OR  
"sarcom*"[Title/Abstract] OR "cystadenom*"[Title/Abstract] OR "papillom*"[Title/Abstract] OR  
"adenofibroma*"[Title/Abstract] OR "cystadenofibroma*"[Title/Abstract] OR  
"adenocarcinom*"[Title/Abstract] OR "adenom*"[Title/Abstract])) OR  
("adenosarcom*"[Title/Abstract] OR "myxoma*"[Title/Abstract] OR "leiomyo*"[Title/Abstract] OR  
"carcinosarcom*"[Title/Abstract] OR "teratom*"[Title/Abstract] OR "dysgerminom*"[Title/Abstract]  
OR "gonadoblast*"[Title/Abstract]))
```

AND

```
("receptors, fsh"[MeSH Terms] OR "follicle stimulating hormone receptor*"[Title/Abstract] OR  
"FSHR"[Title/Abstract] OR "fsh receptor*"[Title/Abstract])
```

**Embase (249 records – 23/01/2024)**

Filter:

- Sources: Embase, Embase+MEDLINE
- Publication types: article, article in press

```
((('ovary'/exp OR 'ovar*':ti,ab,kw OR 'gonad*':ti,ab,kw) AND ('neoplasm'/exp OR 'tumor*':ti,ab,kw  
OR 'tumour*':ti,ab,kw OR 'neoplasm*':ti,ab,kw OR 'carcinom*':ti,ab,kw OR 'cancer*':ti,ab,kw OR  
'sarcom*':ti,ab,kw OR 'cystadenom*':ti,ab,kw OR 'papillom*':ti,ab,kw OR 'adenofibroma*':ti,ab,kw  
OR 'cystadenofibroma*':ti,ab,kw OR 'adenocarcinom*':ti,ab,kw OR 'adenom*':ti,ab,kw)) OR  
(('epithelial*':ti,ab,kw OR 'serous*':ti,ab,kw OR 'brenner*':ti,ab,kw OR 'clear cell*':ti,ab,kw OR  
'seromucinous*':ti,ab,kw OR 'endometrioid*':ti,ab,kw OR 'mucinous*':ti,ab,kw OR  
'mesenchym*':ti,ab,kw OR 'germ cell*':ti,ab,kw OR 'miscellaneous*':ti,ab,kw OR  
'mesonephric*':ti,ab,kw OR 'undifferentiated*':ti,ab,kw OR 'dedifferentiated*':ti,ab,kw OR 'mixed  
cell*':ti,ab,kw OR 'smooth muscle*':ti,ab,kw OR 'mixed epithelial and mesenchymal*':ti,ab,kw OR  
'germ cell*':ti,ab,kw OR 'yolk sac*':ti,ab,kw OR 'embryonal*':ti,ab,kw OR 'chorio*':ti,ab,kw OR  
'mixed germ cell*':ti,ab,kw OR 'struma ovary*':ti,ab,kw OR 'stromal*':ti,ab,kw OR 'germ cell sex  
cord stromal*':ti,ab,kw OR 'germ cell sex cord stromal*':ti,ab,kw OR 'gonadoblastom*':ti,ab,kw OR
```

'undifferentiated gonadal tissue\*':ti,ab,kw OR 'miscellaneous\*':ti,ab,kw OR 'rete ovar\*':ti,ab,kw OR 'wolff\*':ti,ab,kw OR 'solid pseudopapill\*':ti,ab,kw OR 'small cell\*':ti,ab,kw OR 'wilms\*':ti,ab,kw ) AND ('neoplasm'/exp OR 'tumor\*':ti,ab,kw OR 'tumour\*':ti,ab,kw OR 'neoplasm\*':ti,ab,kw OR 'carcinom\*':ti,ab,kw OR 'cancer\*':ti,ab,kw OR 'sarcom\*':ti,ab,kw OR 'cystadenom\*':ti,ab,kw OR 'papillom\*':ti,ab,kw OR 'adenofibroma\*':ti,ab,kw OR 'cystadenofibroma\*':ti,ab,kw OR 'adenocarcinom\*':ti,ab,kw OR 'adenom\*':ti,ab,kw )) OR ('adenosarcom\*':ti,ab,kw OR 'myxoma\*':ti,ab,kw OR 'leiomyo\*':ti,ab,kw OR 'carcinosarcom\*':ti,ab,kw OR 'teratom\*':ti,ab,kw OR 'dysgerminom\*':ti,ab,kw OR 'gonadoblast\*':ti,ab,kw ))

AND

('follitropin receptor'/exp OR 'follicle stimulating hormone receptor\*':ti,ab,kw OR 'FSHR':ti,ab,kw OR 'fsh receptor\*':ti,ab,kw )

#### **Cochrane (5 records – 23/01/2024)**

((ovar\*':ti,ab,kw OR gonad\*':ti,ab,kw) AND (tumor\*':ti,ab,kw OR tumour\*':ti,ab,kw OR neoplasm\*':ti,ab,kw OR carcinom\*':ti,ab,kw OR cancer\*':ti,ab,kw OR sarcom\*':ti,ab,kw OR cystadenom\*':ti,ab,kw OR papillom\*':ti,ab,kw OR adenofibroma\*':ti,ab,kw OR cystadenofibroma\*':ti,ab,kw OR adenocarcinom\*':ti,ab,kw OR adenom\*':ti,ab,kw)) OR ((epithelial\*':ti,ab,kw OR serous\*':ti,ab,kw OR brenner\*':ti,ab,kw OR "clear" NEXT cell\*':ti,ab,kw OR seromucinous\*':ti,ab,kw OR endometrioid\*':ti,ab,kw OR mucinous\*':ti,ab,kw OR mesenchym\*':ti,ab,kw OR "germ" NEXT cell\*':ti,ab,kw OR miscellaneous\*':ti,ab,kw OR mesonephric\*':ti,ab,kw OR undifferentiated\*':ti,ab,kw OR dedifferentiated\*':ti,ab,kw OR "mixed" NEXT cell\*':ti,ab,kw OR "smooth" NEXT muscle\*':ti,ab,kw OR "mixed epithelial and" NEXT mesenchymal\*':ti,ab,kw OR "germ" NEXT cell\*':ti,ab,kw OR "yolk" NEXT sac\*':ti,ab,kw OR embryonal\*':ti,ab,kw OR chorio\*':ti,ab,kw OR "mixed germ" NEXT cell\*':ti,ab,kw OR "struma" NEXT ovary\*':ti,ab,kw OR stromal\*':ti,ab,kw OR "germ cell sex cord" NEXT stromal\*':ti,ab,kw OR "germ cell sex cord" NEXT stromal\*':ti,ab,kw OR gonadoblastom\*':ti,ab,kw OR "undifferentiated gonadal" NEXT tissue\*':ti,ab,kw OR miscellaneous\*':ti,ab,kw OR "rete" NEXT ovar\*':ti,ab,kw OR wolff\*':ti,ab,kw OR "solid" NEXT pseudopapill\*':ti,ab,kw OR "small" NEXT cell\*':ti,ab,kw OR wilms\*':ti,ab,kw) AND (tumor\*':ti,ab,kw OR tumour\*':ti,ab,kw OR neoplasm\*':ti,ab,kw OR carcinom\*':ti,ab,kw OR cancer\*':ti,ab,kw OR sarcom\*':ti,ab,kw OR cystadenom\*':ti,ab,kw OR papillom\*':ti,ab,kw OR adenofibroma\*':ti,ab,kw OR cystadenofibroma\*':ti,ab,kw OR adenocarcinom\*':ti,ab,kw OR adenom\*':ti,ab,kw)) OR (adenosarcom\*':ti,ab,kw OR myxoma\*':ti,ab,kw OR leiomyo\*':ti,ab,kw OR carcinosarcom\*':ti,ab,kw OR teratom\*':ti,ab,kw OR dysgerminom\*':ti,ab,kw OR gonadoblast\*':ti,ab,kw))

AND

("follicle stimulating hormone" NEXT receptor\*':ti,ab,kw OR FSHR\*':ti,ab,kw OR "fsh" NEXT receptor\*':ti,ab,kw)

# Supplementary Figure S1



















## Risk of bias assessments

	Risk of bias									Overall
	D1	D2	D3	D4	D5	D6	D7	D8	D9	
Burger (1998) [34]	○	○	+	×	+	+	+	○	+	+
Cheung (2020) [22]	+	+	+	+	+	+	+	+	+	+
Choi (2004) [50]	×	+	×	×	+	+	+	+	+	+
Choi (2002) [47]	×	+	×	×	+	+	+	+	+	+
Chu (2002) [25]	+	+	×	+	+	+	+	+	+	+
Fan (2014) [51]	×	+	×	×	+	+	+	+	+	+
Feng (2016) [31]	+	+	+	+	+	+	+	+	+	+
Feng (2017) [32]	+	×	+	×	+	+	+	+	+	+
Feng (2017) [33]	+	×	+	+	+	+	+	+	+	+
Fuller (1998) [37]	○	○	+	+	+	+	+	+	+	+
Garrido (2020) [24]	○	○	○	○	+	+	+	+	+	-
Gera (2019) [46]	×	○	×	×	+	+	+	+	+	+
Giacigla (2000) [36]	+	○	×	○	+	+	+	○	+	-
Haltia (2020) [35]	+	○	+	×	+	+	+	+	+	+
Heublein (2013) [52]	×	○	×	×	+	+	+	+	+	+
Hong (2013) [62]	×	○	×	×	+	+	+	+	+	+
Hong (2018) [48]	×	○	×	×	+	+	+	+	+	+
Ji (2004) [63]	○	○	+	×	+	+	+	+	+	+
King (2003) [59]	+	○	×	○	+	+	+	+	+	+
Lee(2015) [57]	×	○	×	×	+	+	+	+	+	+
Lenhard (2011) [23]	+	○	+	×	+	+	○	+	+	+
Li (2006) [64]	+	○	×	○	+	+	+	+	+	+
Minegishi (2000) [27]	+	+	+	+	+	+	+	+	+	+
Modi (2014) [53]	×	○	×	○	+	+	+	+	+	+
Moeker (2017) [58]	×	+	+	+	+	+	+	+	+	+
Nakano (1989) [28]	○	+	+	×	+	+	+	+	+	+
Nishi (2001) [40]	×	+	×	+	+	+	+	+	+	+
Parrott (2001) [54]	×	○	×	×	+	+	+	+	+	+
Perales (2017) [14]	○	+	+	×	+	+	+	+	+	+
Reinholtz (2000) [39]	○	+	+	×	+	+	+	+	+	+
Stouffer (1984) [30]	+	+	+	×	+	+	+	+	+	+
Syed (2001) [65]	+	+	×	×	+	+	+	+	+	+
Urbanska (2015) [55]	×	○	×	×	+	+	+	+	+	+
Wang (2003) [26]	+	+	+	+	+	+	+	+	+	+
Xie (2017) [60]	+	+	×	×	+	+	+	+	+	+
Zhang (2020) [66]	×	○	×	×	+	+	+	+	+	+
Zhang (2018) [49]	+	+	×	+	+	○	○	+	+	-
Zhang (2009) [56]	○	+	+	×	+	+	+	+	+	+
Zheng (2000) [29]	+	+	+	×	+	+	+	+	+	+

Study

D1: Sample frame  
D2: Recruitment  
D3: Sample size  
D4: Study description  
D5: Coverage bias  
D6: Measurement or classification bias  
D7: Considerable judgment  
D8: Statistical analysis  
D9: Response rate

Judgement  
 High  
 Unclear  
 Low  
 Not applicable

		Risk of bias								
		D1	D2	D3	D4	D5	D6	D7	D8	Overall
Study	Choong (2002) [41]									
	Mc Neilage (2007) [38]									

D1: Selection bias

D2: Exposure (ascertainment bias)

D3: Outcome (ascertainment bias)

D4: Observation (causality bias)


D5: Challenge/rechallenge (causality bias)


D6: Dose-response effect (causality bias)

D7: Follow-up (reporting bias)

D8: Sufficient described (reporting bias)

Judgement

 Low

 Not applicable

(b)

Figure S1. (a) Quality assessment of the included descriptive cross sectional studies using the JBI tool.  
 (b) Quality assessment of the included case report studies using the Murads tool.