Mature Solid Teratoma

- Predominantly solid growth pattern
- Rare in the ovary
- Only mature elements
- Neural elements often predominate
- Can be associated with glial implants
- Tissues all at fertilization age > 8 weeks
Mature Solid Teratoma

Fetal external granular layer
Molecular layer
Internal granular layer

Immature Teratoma

**Differential Diagnosis**

- Microscopic foci of yolk sac tumor
- Mixed germ cell tumor
Microscopic Foci of Yolk Sac Tumor

SALL4  HNF-1  AFP
Case 14 Diagnosis

Immature Teratoma with Microscopic Foci of Yolk Sac Tumor

O'Connor and Norris (AFIP)
- Studied 244 Immature Teratomas
- 8 had 1-3 foci of YST < 1 mm
- 7 had 1-3 foci of YST < 2 mm
- 1 had 2 foci of YST < 3 mm

7% of immature teratomas had microscopic foci of YST and this did not impact the prognosis

13 Immature Teratoma + micro Yolk Sac Tumor (1 G1, 6 G2, 6 G3)
9 (69%) had elevated AFP
1 Metastatic yolk sac tumor in liver; ANED after treatment

POG/CSG Study of Immature Teratoma
2137-2143, 1999
Median age 10.8 y
Mean age 11.4 y

13 (30%) had gliomatosis peritonei
31 pure Immature Teratoma (17 G1, 12 G2, 2 G3)
8 (26%) had elevated AFP

No recurrences
Case 15 Clinical History

- 47 year old woman
- Operated on for “fibroids”
- The uterus contained leiomyomas, but a large left ovarian tumor was also discovered
- No tumor was identified outside the ovary (stage IA)
- The patient was well when last seen in November, 2011 (10 years)

Case 15 Gross Pathology

- The left ovary was replaced by a 14.9 cm tumor
- The exterior was smooth and glistening, with no external tumor growth
- The cut surfaces were fleshy and light tan to pink to tan-yellow