Juvenile Granulosa Cell Tumor

- Average age 13 years (range 0-65+)
- Clinical presentation:
  - Prepubertal: 80% have precocious pseudopuberty
  - Postpubertal: Abdominal distention, pain, menstrual abnormalities
- Most present in stage Ia and have excellent survival
- Treatment is USO in stage IA
Juvenile Granulosa Cell Tumor
Immunohistochemistry Similar to AGCT
With Some Differences

- Positive for AGCT markers
- Rare positive EMA
- Often positive for CD99
- No FOXL2 mutation
- But, positive FOXL2 immunostaining
Watch Out! Some staining for EMA can be seen in JGCT!
<table>
<thead>
<tr>
<th>Adult GCT</th>
<th>Juvenile GCT</th>
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</thead>
<tbody>
<tr>
<td>&lt; 1% prepubertal</td>
<td>50% prepubertal</td>
</tr>
<tr>
<td>Most &gt; 30 years</td>
<td>Most &lt; 30 years</td>
</tr>
<tr>
<td>FOXL2 mutation</td>
<td>No FOXL2 mutation</td>
</tr>
<tr>
<td>Microfollicles</td>
<td>Macrofollicles</td>
</tr>
<tr>
<td>Fine chromatin Grooved nuclei</td>
<td>Coarse chromatin Round nuclei</td>
</tr>
<tr>
<td>Minimal atypia, few mf</td>
<td>Marked atypia, many mf</td>
</tr>
<tr>
<td>Cells rarely luteinized</td>
<td>Cells often luteinized</td>
</tr>
<tr>
<td>Late recurrences</td>
<td>Most recur &lt; 3 years</td>
</tr>
</tbody>
</table>

Current UCSF Immunostains for GCT

- **Positive Stains**
  - Inhibin
  - FOXL2
  - Maybe SF-1 and/or calretinin

- **Negative Stains**
  - Cytokeratin Cocktail
  - EMA

Case 16 Clinical History

- 50 year old woman with metrorrhagia
- Pelvic ultrasound revealed a slightly enlarged right ovary
- Followed, but the enlargement persisted
- Elected to have a laparoscopic hysterectomy and BSO
- At surgery, the ovarian mass seen on ultrasound could not be visualized