Pelvic Mass Detected (by family physician or general gynecologist)

Preliminary Work-up May Include:
(by family physician or general gynecologist)
(1) Imaging: Ultrasound abdomen and pelvis and/or CT chest/abdomen/pelvis
(2) Tumor markers: AFP, HCG, LDH, CA-125

Referral to Gynecologic Oncologist
(when germ cell tumour is suspected based on preliminary work-up)

Incidental finding of malignant ovarian germ cell tumour

Primary Surgery and Staging for Germ Cell Tumours
(by gynecologic oncologist)
(1) Unilateral salpingo-oophorectomy
(2) Fertility preserving surgical staging including: washings, pelvic and para aortic lymph node sampling, peritoneal biopsies and omentectomy
(3) Surgery if child bearing complete: Total abdominal hysterectomy & bilateral salpingo oophorectomy

Diagnosis of Germ Cell Tumour
Algorithm for the Management of Malignant Ovarian Germ Cell Tumours (GYNE-001)

**Dysgerminoma**
- **Stage IA**
  - Observation
- **Stage IB/IC**
  - Chemotherapy (see CT regimen below)
- **Stage II**
  - Observation
  - Chemotherapy (see CT regimen below)

**Immature Teratoma (Stage IA only)**
- **Grade 1**
  - Observation
- **Grade 2**
  - Chemotherapy (see CT regimen below)
- **Grade 3**
  - Chemotherapy (see CT regimen below)

**Other Germ Cell Tumours (i.e.: Yolk sac tumour)**
- **Stage III and Stage IV (Dysgerminomas and other germ cell tumours)**
  - Surgical candidate? (no extensive disease)
  - CT +/- RT
  - Surgery (maximal debulking)
  - Chemotherapy (see CT regimen below)

**Follow-up and Surveillance**
- **Dysgerminomas (Stage I) & Immature Teratomas (Stage I, Grade 1):** observe
- **Dysgerminomas (Stage II-IV), Embryonal Tumours, Endodermal Sinus Tumours & Immature Teratomas (Stage I, Grade 2/3 or Stage II-IV):**
  - (1) Exam: abdominal/pelvic exam
  - (2) Imaging: abdominal/pelvic CT if clinically indicated, at physician discretion; CXR at physician discretion
  - (3) Markers: beta-human chorionic gonadotropin, alpha-fetoprotein, lactate dehydrogenase, as indicated
  - If complete clinical response is achieved, observe markers every 3 months for 2 years if initially elevated
  - If residual tumor on radiographic imaging but markers are normal, consider surgical resection or observe
  - After 2 years from completing treatment, follow-up visits q 6 months

**Chemotherapy Regimens (CT)**
- **3 day BEP:**
  - cisplatin (35 mg/m², d1-3); etoposide (165 mg/m², d1-3); bleomycin (30 units, d1,8,15)
- **5 day BEP:**
  - bleomycin (30 units/week); etoposide (100 mg/m²/d, d1-5); cisplatin (20 mg/m²/d, d1-5)
- **5 day EP:**
  - etoposide (100 mg/m²/d, d1-5); cisplatin (20 mg/m²/d, d1-5)

**Good Prognosis** (see chart below) = BEP x 3 cycles OR EP x 4 cycles

**Intermediate/Poor Prognosis** (see chart below) = BEP x 4 cycles

**Salvage Therapy** TIP:
- cisplatin (35 mg/m², d 1-3); ifosfamide (2 mg/m², d 2-4); taxol (135 mg/m², d 1)

**Indications used to determine prognosis for dysgerminoma & non-dysgerminomas:**

<table>
<thead>
<tr>
<th>Prognosis</th>
<th>Dysgerminoma</th>
<th>Non-dysgerminoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>No non-pulmonary visceral mets</td>
<td>No non-pulmonary visceral mets</td>
</tr>
<tr>
<td></td>
<td>Any LDH, HCG</td>
<td>AFP &lt;1000</td>
</tr>
<tr>
<td></td>
<td>Normal AFP</td>
<td>HCG &lt;5000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LDH &lt;1.5 x normal</td>
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<tr>
<td>Intermediate</td>
<td>Pulmonary visceral mets present</td>
<td>No non-pulmonary visceral mets</td>
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<tr>
<td></td>
<td>Any LDH, HCG</td>
<td>AFP &gt;1000 &amp; &lt;10000</td>
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<tr>
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<td>Normal AFP</td>
<td>HCG &gt;5000 &amp; &lt;5000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LDH &gt;1.5 &amp; &lt;10 x normal</td>
</tr>
<tr>
<td>Poor</td>
<td>Non-pulmonary mets present</td>
<td>No non-pulmonary visceral mets</td>
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<tr>
<td></td>
<td>AFP &gt;1000</td>
<td>AFP &gt;1000</td>
</tr>
<tr>
<td></td>
<td>HCG &gt;5000</td>
<td>HCG &gt;5000</td>
</tr>
<tr>
<td></td>
<td>LDH &gt;0.1 x normal</td>
<td>LDH &gt;0.1 x normal</td>
</tr>
</tbody>
</table>

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