**Pelvic Mass and Ovarian Cancer**

Transvaginal ultrasound is generally indicated in evaluation of a pelvic mass and is the most efficient, accurate, and least expensive of the imaging modalities. A number of malignant risk indices have been developed, with accuracy related to ultrasonographic experience.

Young patients with large complex or solid masses should have laboratory evaluation of available tumour markers (Ca 125) to detect possible epithelial malignancy and germ cell cancers (hCG, alpha-fetoprotein, LDH).

Perimenopausal and postmenopausal patients with a pelvic mass should have Ca 125 and CEA testing, although a normal Ca 125 does not eliminate the possibility of cancer, particularly early-stage disease.

Patients with masses that is clinically suspicious for cancer (see below) should be offered the opportunity of a preoperative consultation with a gynecologic oncologist. Women should receive realistic preoperative explanations of their cancer risk and understand the potential extent of the surgical procedure, including the risks and benefits of a gastrointestinal or genitourinary operation.

Specific clinical situations suggest a higher risk of malignancy and referral or consultation with a gynecologic oncologist may be beneficial to women in the high risk situations when:

- Evidence of advanced disease is present: pelvic mass with omental caking; presence of effusion, ascites
- A clinically suspicious pelvic mass [large (>10cm), complex, fixed, nodular, bilateral] is diagnosed
- Premenarchal girls require surgical treatment for a pelvic mass
- Postmenopausal women have suspicious ovarian masses or elevated tumour markers.
- Perimenopausal women have ovarian masses, particularly when associated with elevated Ca 125. Elevations between 35-65 U/mL are associated with a cancer risk of 50-60%. A Ca 125 >65 U/mL in a 50 year old or older woman is virtually diagnostic of malignancy with a specificity of 98%.
- Young patients have a pelvic mass and elevated tumour markers (Ca 125, AFP, hCG, LDH)
- Suspicious findings are present on imaging studies. The risk of malignancy in a postmenopausal woman with a unilocular mass without solid components is <1%, increasing to 8% in a multilocular mass and 70% in a mass with solid components
- Complex masses with solid components or excrescences or otherwise suspicious for cancer are present.
- Suspicious pelvic masses are found in women with a significant family or personal history of ovarian, breast, or other cancers (one or more first-degree relatives)
The minimal preoperative evaluation should include tumour markers, chest x-ray, and computed tomography if carcinomatosis is suspected.

Operative staging involves peritoneal washings, bilateral salpingo-oophorectomy, total hysterectomy, pelvic and paraaortic lymphadenectomy, omentectomy, and cytoreduction. Involvement of gynecologic oncologists in cases of women with early-stage disease may assist in preservation of fertility, if appropriate and desired, particularly when a germ cell or borderline tumour present.

Epithelial ovarian cancer management is stage related (FIGO):

- Surgically staged 1A and 1B grade 1 require no adjuvant treatment. Other stage 1 patients may be candidates for platinum-based chemotherapy (Paclitaxel 175mg/m2 and Carboplatin AUC 6 Q3weeks X 6 cycles)
- Women who have not undergone optimal surgical staging can be offered two options. The first option is that they undergo re-operation to optimally define the tumour stage and be offered adjuvant therapy based on the findings. The other option is that they be offered platinum-based chemotherapy (Paclitaxel 175mg/m2 and Carboplatin AUC 6 Q3weeks X 6 cycles) to decrease the risk of recurrence and improve survival
- Stage II-IV disease are typically treated with 6 cycles of systemic platinum-based combination chemotherapy (Paclitaxel 175mg/m2 and Carboplatin AUC 6 Q3weeks X 6 cycles) following attempts at optimal cytoreduction
- In addition, patients with stage III disease who are optimally cytoreduced to <=1cm of residual disease may be candidates for intraperitoneal chemotherapy (Cycle 1 consists of Day 1 IV Paclitaxel 135mg/m2, Day 2 IV Cisplatin 75mg/m2 and thereafter cycles 2-6 consists of Day 1 IV Paclitaxel 135mg/m2 over 24 hrs, Day 2 IP Cisplatin 75mg/m2, and Day 8 IP Paclitaxel 60mg/m2 Q3weeks)
- Patients with advanced disease who are not candidates for initial surgical exploration may benefit from neoadjuvant platinum-based (Paclitaxel 175mg/m2 and Carboplatin AUC 6 Q3weeks X 6 cycles) combination chemotherapy after the confirmation of the diagnosis of ovarian cancer
- Although there are no randomized trials of chemotherapy in fallopian tube cancer or primary peritoneal cancer, given that most clinicians treat women with these uncommon cancers as they would patients with ovarian cancer, we feel the recommendations made above can be applied to fallopian tube and primary peritoneal cancers.
- The diagnosis of borderline or low malignant potential disease require surgical resection or cytoreduction and are unlikely to benefit from additional chemotherapy unless invasive implants are present.

Follow-up

- Every 3-4 months for the first 2 years, every 6 months until year five, and thereafter on a yearly basis
• Shared-care with the referring physician is strongly encouraged. It involves alternating the follow-up visits between the gynecologic oncology team and the referring physician.
• Longitudinal follow-up with gynecologic oncologist should help identify those patients who are candidates for additional surgery, chemotherapy, radiotherapy, or investigational therapy.

Second-Line Chemotherapy:

• Each patient is unique in her disease and thus, treatments must be individualized.
• Whenever clinical trials are available, all patients should be offered participation in these trials. Systemic therapy for recurrent ovarian cancer is not curative. The goals of treatment are to improve quality of life and if possible to increase the progression free interval thus, consideration of toxicities of treatment is of paramount importance.
• Platinum-sensitive (recurrence >6 months from the completion of last chemotherapy treatment): retreat with Carboplatin AUC 6 +/- Paclitaxel 175mg/m2 Q3weeks X 6 cycles, or offer eligible protocol.
• Platinum-resistant (recurrence <6 months from completion of last chemotherapy treatment): offer eligible protocol, or liposomal doxorubicin, gemcitabine, taxanes, topotecan, etoposide, vinorelbine etc.

Relevant Clinical Trials:

2. McG 0530: A randomized, parallel group, open-label, active controlled, multicenter phase III trial of Patupilone (EPO906) versus Pegylated Liposomal Doxorubicin (Caelyx) in taxane/platinum refractory/resistant patients with recurrent epithelial ovarian, primary fallopian or primary peritoneal cancer.

Reference:
SGO guidelines Gynecol Oncol 78; S1-S13, 2000.
Ontario Cancer Care Practice Guideline Reports May 2004 and June 2004.