Referral Guidelines for Adnexal Mass

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It is estimated that 5-10% of women in the United States will undergo a surgical procedure for an adnexal mass during their lifetime. This leads to almost 200,000 hospitalizations per year with ovarian cancer diagnosed in approximately 20,000 women per year. Exclusion of malignancy is the primary goal in evaluation of an adnexal mass. Determining which of these women have high-risk adnexal lesions and should be referred to a gynecologic oncologist for management is an important yet challenging clinical decision made most commonly by generalist obstetrician-gynecologists as well as primary care physicians or internists.

Guidelines for referral to a gynecologic oncologist have been developed in an attempt to identify patients at high risk for ovarian cancer and to avoid delays in diagnosis. The advantages of referral to a gynecologic oncologist for surgical treatment of ovarian cancer compared to management by a general surgeon and/or gynecologist have been well documented and are largely well accepted throughout the United States. Supportive evidence for referral includes decreased relative risk of reoperation, improved disease-free interval and a trend towards increased survival for those patients managed by a gynecologic oncologist. In 1994, the NIH attempted to improve referral patterns, stating, “women with ovarian masses who have been identified preoperatively as having a significant risk of ovarian cancer should be given the option of having their surgery performed by a gynecologic oncologist”. Further clarification came in 2002 through a joint effort by the Society of Gynecologic Oncologists (SGO) and the American College of Obstetrics and Gynecology (ACOG) with publication of a Joint Committee Opinion regarding the role of the generalist obstetrician-gynecologist in the early detection of ovarian cancer. The committee acknowledged the common misunderstanding that in the 70% of patients who are diagnosed at advanced stage, symptoms only appear in the late phase of the disease process. Importantly, 70% of patients recall having symptoms for more than 3 months prior to diagnosis and 35% for more than 6 months. Therefore, in order to achieve earlier diagnosis, it is imperative that providers educate their patients to the subtle symptoms of ovarian cancer, maintain a high level of suspicion in the symptomatic patient, and provide expeditious clinical evaluation.

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In patients with persistent symptoms of abdominal bloating, abdominal and/or pelvic pain, back pain, urinary frequency, constipation, early satiety, or indigestion, ovarian cancer should be included in the differential diagnosis. Recommended workup of these complaints includes thorough medical and family history, physical examination including pelvic evaluation, and radiologic imaging of the pelvis (transvaginal pelvic ultrasound) before making a nonspecific diagnosis such as irritable bowel syndrome, stress or depression. If a pelvic/abdominal mass is identified, measurement of the serum Ca125 may be useful as long as the nuances of the test, particularly when assessed in premenopausal women, are clearly understood. A number of benign conditions can cause Ca125 elevations including uterine leiomyomata, pelvic inflammatory disease, endometriosis, adenomyosis, pregnancy, and even menstruation. Importantly, while 80% of patients with advanced epithelial ovarian cancer will have elevated Ca125 levels, a normal Ca125 does not effectively exclude the disease as up to 50% of women with early-stage ovarian cancer will have normal values.

The SGO/ACOG Joint Committee Opinion recommends referral to a gynecologic oncologist under the following circumstances:

I. Premenopausal (<50yrs old) women with a pelvic mass suspicious for a malignant ovarian neoplasm as suggested by one of the following:
- Very elevated Ca125 level: >200 U/ml
- Radiologic and/or clinical findings of ascites, abdominal or distant metastasis
- Family history of one or more first degree relatives with ovarian or breast cancer

II. Postmenopausal (>50yrs old) women with a pelvic mass suspicious for a malignant ovarian neoplasm as suggested by one of the following:
- Elevated Ca125 level (>35 U/ml)
- Nodular or fixed pelvic mass
- Radiologic and/or clinical findings of ascites, abdominal or distant metastasis
- Family history of one or more first-degree relatives with ovarian or breast cancer

The essential components necessary to evaluate the patient with an adnexal mass can be summarized from these guidelines. Evidence of distant metastasis should be sought through careful lymph node surveillance, palpation and percussion of the abdomen for nodularity, omental caking and ascites. Pelvic examination including rectovaginal exam should assess mass characteristics including size, fixation, nodularity and invasion into adjacent tissue. Radiologic tools, particularly pelvic ultrasound, can be used to describe features of the mass including size, pseudocysts, solid/cystic components, and ascites. Genetic risk assessment is determined through obtaining a detailed family history. Finally, all patients being considered for surgery should have a Ca125 level measured.

Since the publication of the SGO/ACOG Joint Opinion, a number of authors have attempted to evaluate the efficacy of these referral guidelines. Retrospective data estimates a positive predictive value of 33.8%-39.6%, 79.2% sensitivity, and 69.6% specificity in premenopausal women.

In postmenopausal women, these guidelines have a positive predictive value of 59.5%-64.6%, 93.2% sensitivity, and 59.9% specificity. Overall, the negative predictive value in both groups is greater than 90%. In general, the guidelines perform well in predicting advanced-stage ovarian cancer while they perform poorly in identifying early-stage disease, particularly in premenopausal women. Absence of symptoms and lack of objective tools for early detection likely contribute to the poor performance in early-stage patients. In both groups, there is an over-referral rate of 30% for benign masses. While this leads to increased anxiety for the patient with increased specialist referral, it avoids potential under-referral, inappropriate treatment and inadequate surgery.

The sensitivity of these guidelines for detecting ovarian cancer in premenopausal patients can be improved by lowering the Ca125 level for referral to more than 67 U/ml (versus >200 U/ml). Lowering the cutoff level also seems to improve the sensitivity of detecting early-stage ovarian cancer in this group of patients. Additionally, family history does not appear to significantly impact the performance of these guidelines. However, irrespective of the nature of an adnexal mass, any patient with a family history suggestive of a familial breast-ovarian cancer syndrome should be referred to a specialist for counseling regarding risk assessment and screening.

In summary, the SGO/ACOG Joint Committee guidelines were established to help ensure that women with advanced ovarian cancer were appropriately referred to a gynecologic oncologist for definitive management. Primary physicians should be aware that these guidelines have a poor sensitivity for identifying early-stage ovarian cancer, especially in premenopausal women. Caution should be taken when operating on such patients with every effort made to ensure availability of a gynecologic oncologist in the event that a malignancy is identified at the time of surgery. Lowering the Ca125 referral level to >67 U/ml for premenopausal women with a suspicious adnexal mass will improve the sensitivity of these guidelines and ensure more appropriate treatment by a gynecologic oncologist.

As screening tools for ovarian cancer improve and more superior diagnostic tests become available, these referral guidelines will continue to be modified. Adherence to these guidelines will assist generalist obstetrician-gynecologists and other primary care physicians in the appropriate management of patients in whom they have identified a suspicious adnexal mass and ultimately, ensure appropriate surgical management of these patients by a gynecologic oncologist.

References: