

Commentary on “Provider Adherence to Surgical Guidelines for Risk Reducing Salpingo-Oophorectomy”

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ABSTRACT

BRCA mutation carriers have a significantly increased lifetime risk of ovarian cancer compared to the general population. Risk-Reducing Salpingo-Oophorectomy (RRSO) is the primary evidence-based treatment to decrease that risk. The National Comprehensive Care Network (NCCN) and American College of Obstetricians and Gynecologists (ACOG) endorse a set of surgical guidelines to be completed at the time of RRSO.

In the study “Provider Adherence to Surgical Guidelines for Risk Reducing Salpingo-oophorectomy”, we found that only two-thirds of all surgical providers were fully adherent to these guidelines. Gynecologic oncologists were more likely to follow surgical guidelines compared to general Obstetrician Gynecologists, and more likely to diagnose occult neoplasia despite similar patient populations. Here we discuss the reason for the surgical protocol, the clinical implications of noncompliance, and practical ways that providers can ensure full adherence to the protocol.

Keywords: Risk-reducing; Salpingo-oophorectomy; BRCA; OBGYN; Gynecologic oncologist

DESCRIPTION

Background, objectives, and main findings

Women with pathogenic germline mutations in BRCA1 or BRCA2 genes have a significantly increased risk of developing breast and ovarian cancer compared to the general population. Undergoing Risk-Reducing Salpingo-Oophorectomy (RRSO) decreases the risk of ovarian cancer by 80-90% and provides an overall mortality benefit for these women [1-4].

Earlier age at surgery confers greater risk reduction and for this reason, it is recommended that women with pathogenic BRCA mutations undergo RRSO between the ages of 35-40, or when childbearing is complete [4,5]. Because 2-10% of these women have occult malignancy at the time of RRSO [6,7], the National Comprehensive Care Network (NCCN) and American College of Obstetricians and Gynecologists (ACOG) endorse a set of surgical guidelines in order to maximize risk reduction and accurately diagnose occult malignancies [4,5]. The surgical protocol includes the following:

- Complete resection of the fallopian tube

- Collection of pelvic washings
- Ligation of the ovarian vessels 2-3 cm proximal to the ovary
- A complete survey of the entire abdominal cavity with biopsies of anything abnormal
- A detailed pathologic review that involves serial sectioning and microscopic examination of the entire specimen (the Sectioning and Extensively Examining the Fimbriated End, or SEE-FIM, protocol) [8,9].

Because understanding adherence patterns to evidence-based guidelines is necessary to ensure quality patient care, the primary objective of this study was to investigate compliance with the NCCN recommended surgical protocol amongst Gynecologic Oncologists (GYNONCs) and General Obstetrician Gynecologists (OBGYNs).

This study was a retrospective cohort study of women with pathogenic germline BRCA 1 and 2 mutations that underwent RRSO between 2011 and 2017. Nearly 300 women who met inclusion criteria were identified within two large healthcare systems that employed both academic and private practice OBGYNs, GYNONCs, and pathologists. We found that despite clear surgical guidelines, only two-thirds of all providers' fully

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adhered to national guidelines. GYNONCs were more likely to follow these guidelines compared to general OBGYNs (91% versus 41%, $p < 0.01$). Importantly, we also found that GYNONCs were more likely to diagnose occult neoplasia despite similar patient populations (6.3% of GYNONC patients versus 0.8% of OBGYN patients, $p = 0.03$) [9].

Bilateral salpingo-oophorectomy is a common surgical procedure that any OBGYN should be able to complete safely. It is important for providers to understand, however, that when the indication for this surgery is risk reduction, there are national guidelines in place in order to identify occult malignancy and ultimately improve patient outcomes. The onus is on us as health care providers to stay up to date with recommendations and comply with them.

One important take-away point from this study is that adherence to guidelines is associated with improved rates of diagnosis of occult malignancy. Patient characteristics, including age and type of BRCA mutation, did not differ between groups. Therefore, we expected to see similar rates of occult malignancy. However, the GYNONC group had significantly more patients with a diagnosis of occult malignancy. Current literature suggests that comprehensive pathology review correlates with higher rates of diagnoses of occult malignancies [3,6,9], and our findings support this. The fact that the SEE-FIM protocol was followed more frequently in cases performed by a GYNONC likely contributes to the higher rate of occult malignancy diagnosis in this group. When the surgical and pathological protocol is not followed, it creates a potential opportunity for occult malignancy to be missed.

This study also highlights the importance of communication between surgeons and the pathology team. We recognize that pathologists are responsible for executing the SEE-FIM protocol. It is possible that the pathologist associates a specimen received from an oncologist as having a higher risk of malignancy, leading to an inherent bias to look more closely for malignancy. This can be overcome by communication between the surgeon and the pathologist. It is the surgeon's responsibility to ensure their pathologist is aware of the patient's diagnosis and reason for surgery.

Multiple opportunities exist to ensure communication. For example, the surgeon themselves could note that the patient carries a BRCA mutation and request SEE-FIM protocol on the requisition form, pathologic requests could be discussed during the preoperative time-out, or the surgeon could be in direct communication with the pathologist following the procedure. If a surgeon notices no reference to SEE-FIM protocol in a BRCA-mutant patient's final pathology report, they could render the appropriate feedback for corrective action.

CONCLUSION

This research demonstrates the clinical implications of noncompliance with the surgical protocol recommended by the NCCN, the need for improved provider education, and the importance of communication with the pathology team responsible for reviewing the surgical specimen. Rates of RRSO will likely continue to increase as genetic testing becomes more widespread. It is reasonable to consider referral to a subspecialist or a hospital that has providers who routinely do these procedures to ensure patients are receiving comprehensive, guideline-based care.

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