Priority Health

MEDICAL POLICY
No. 91508-R9

PROPHYLACTIC CANCER RISK REDUCTION SURGERY

Effective Date: September 1, 2025	**Review Dates: 8/05, 4/06, 2/07, 7/07, 2/08, 10/08, 2/09, 2/10, 2/11, 2/12, 2/13, 2/14, 2/15, 2/16, 2/17, 2/18, 2/19, 2/20, 8/20, 8/21, 8/22, 8/23, 8/24, 8/25**
Date Of Origin: 8/10/2005	**Status: Current**

Summary of Changes

Addition:

- Prophylactic simple mastectomy is medically necessary for members who have a history of chest radiation before 30 years of age, and members with confirmed pathogenic variants of breast cancer susceptibility genes.
- Language from Breast Related Procedures policy # 91545: An initial procedure (reduction, augmentation, or mastopexy) on the contralateral breast to produce symmetry between the affected and unaffected breasts for prophylactic simple mastectomy is covered.

Deletion:

- Age limitations
  - Prophylactic mastectomy: Requirement of having a first, second-degree and/or third-degree relative who was diagnosed with breast cancer at age 50 or younger.
  - Prophylactic total gastrectomy: Requirement of a positive family history of gastric cancer under the age of 50.

Clarification:

- New sections: Government Regulations, and Guidelines/Position Statements.
- Formatting.

I. POLICY/CRITERIA

Prophylactic surgery for cancer risk reduction is medically necessary as indicated below.

A. **Prophylactic total gastrectomy** for hereditary diffuse gastric cancer is medically necessary for members with known mutations in the *CDH1* gene and a positive family history of gastric cancer.

B. **Prophylactic hysterectomy** is medically necessary when at least one of the following criteria is met:

1. Patients with known hereditary nonpolyposis colon cancer (HNPCC) who have completed childbearing.
2. Patients with an HNPCC associated mutation that have completed childbearing.

C. **Prophylactic simple mastectomy** is medically necessary when any ONE of the following criteria is met:

1. **Bilateral prophylactic mastectomy** in member with no personal history of breast cancer AND at least one of the following:
    a. Member with known breast cancer pre-disposition for deleterious mutation (*BRCA1 or BRCA2* or other strongly predisposing breast cancer susceptibility gene) confirmed by genetic testing (See *Genetics: Counseling, Testing, and Screening medical policy #91540*); or
    b. The member has atypical hyperplasia on biopsy as confirmed by a pathologist and is not interested in chemoprevention with selective estrogen receptor modulators (SERMS), i.e., tamoxifen and raloxifene; or
    c. A family history of any of following. An evaluation of overall risk and discussion of the risks and benefits of all surgical and non-surgical options for risk reduction is required:
        1. Two or more first-degree relatives on the same side of the family with breast cancer,;
        2. One first-degree relative with breast cancer and **one** of the following:
            i. Two or more second-degree and/or third-degree relatives with breast cancer; or
            ii. The diagnosis was before the age of 45 and one other relative with breast cancer at any age or
            iii. One or more relatives with ovarian cancer; or
            iv. The first-degree relative has bilateral breast cancer
        3. Two or more second degree relatives on the same side of the family with:
            i. One with breast cancer and one with ovarian cancer
            ii. Ovarian cancer
    d. Women with large, ptotic, dense, or disproportionally sized breasts that are difficult to evaluate mammographically.
    e. A history of diffuse calcifications and multiple biopsies resulting in difficulty performing or interpreting diagnostic breast exams.
    f. History of chest wall radiation before 30 years of age.
2. **Contralateral or bilateral prophylactic mastectomy** with personal history of breast cancer and one of the following indications:

a. It is the opinion of the surgeon and preference of the member that in order to achieve symmetry that bilateral mastectomy would produce the best outcome; or
b. The member has a family history of any of following:
    1. Two or more first-degree relatives on the same side of the family with breast cancer,;
    2. One first- degree relative with breast cancer and **one** of the following:
        - Two or more second-degree and / or third-degree relatives with breast cancer; or
        - The diagnosis was before the age of 45 and one other relative with breast cancer at any age or
        - One or more relatives with ovarian cancer; or
        - The first degree relative has bilateral breast cancer
    3. Two or more second degree relatives on the same side of the family with:
        - One with breast cancer and one with ovarian cancer
        - Ovarian cancer
c. Member with multiple primary breast cancers in the sentinel breast.
d. Member diagnosed with invasive breast cancer at age 45 years of age or younger.
e. Member who are confirmed *BRCA 1* or *BRCA 2*mutation carriers or other pathogenic variants of other breast cancer susceptibility genes. (See Genetics: Counseling, Testing, and Screening Policy #91540)
f. Member with lobular carcinoma in situ or atypical hyperplasia in the ipsilateral breast.
g. Member with invasive lobular carcinoma of the ipsilateral breast.
h. A history of diffuse calcifications and multiple biopsies resulting in difficulty performing or interpreting diagnostic breast exams.

3. Covered treatment options are:
    a. Simple mastectomy and simple mastectomy with reconstruction (breast implant)
    b. An initial procedure (reduction, augmentation, or mastopexy) on the contralateral breast to produce symmetry between the affected and unaffected breasts.

D. **Prophylactic oophorectomy** is medically necessary when at least one of following criteria is met:

1. Member who has been determined to be a member of a family with a hereditary ovarian cancer syndrome based on a family pedigree constructed by a genetic counselor or physician competent in determining the presence of an autosomal dominant inheritance pattern in which genetic testing is either not available or uninformative.
2. Member with a *BRCA* mutation; or a mutation associated with hereditary nonpolyposis colorectal cancer syndrome (HNPCC)
3. Member with a history of breast cancer, which is estrogen receptor (ER) positive, and who are premenopausal.
4. Member with a personal history of breast cancer and at least one first degree relative (e.g., mother, sister, daughter) with history of ovarian cancer; or
5. Member with one first degree relative (e.g., mother, sister, daughter) and one or more second degree relatives (e.g., maternal or paternal aunt, grandmother, niece) with ovarian cancer.

E. **Prophylactic salpingo-oophorectomy** is medically necessary when indications in the National Comprehensive Cancer Network (NCCN) Guidelines for Epithelial Ovarian Cancer/Fallopian Tube Cancer/ Primary Peritoneal Cancer and Genetic/Familial High-Risk Assessment: Breast and Ovarian, Pancreatic, and Prostate are met.

F. **Prophylactic thyroidectomy**: See *Thyroid-Related Procedures (#91621)*

II. GOVERNMENT REGULATIONS

CMS Coverage Determinations	Title and Number
National Coverage Determinations (NCDs)	N/A
Local Coverage Determinations	N/A

III. GUIDELINES AND POSITION STATEMENTS

Medical or Professional Society	Recommendation
The American Society of Breast Surgeons (ASBrS) - 2016	Contralateral Prophylactic Mastectomy (CPM) Consensus Statement from the American Society of Breast Surgeons: Data on CPM Outcomes and Risks

International Gastric Cancer Linkage Consortium (IGCLC) - 2020	Hereditary diffuse gastric cancer: updated clinical practice guidelines
National Comprehensive Cancer Center Network (NCCN): Breast Cancer Risk Reduction. Version 2.2025	Risk-reducing mastectomy should generally be considered in individuals with a pathogenic/likely pathogenic genetic variant in high-penetrance breast cancer susceptibility genes (see NCCN Guidelines for Genetic/Familial High-Risk Assessment: Breast, Ovarian, and Pancreatic), compelling family history, or those receiving chest wall radiation before 30 years of age. There is no established benefit of risk-reducing mastectomy in individuals with pathogenic/likely pathogenic variants in moderate- or low-penetrance breast cancer susceptibility genes in the absence of a compelling family history. While this approach has been previously considered for LCIS, the currently preferred approach for LCIS is a risk-reducing endocrine agent. Risk estimation is a complex and individualized process; the NCCN Panel does not recommend a specific risk cutoff for decision-making regarding risk-reducing mastectomy. Individualizing management is important.
National Comprehensive Cancer Center Network (NCCN): Genetic/familial high-risk assessment: Breast, Ovarian, Pancreatic, and Prostate. Version 1.2025	The NCCN Guidelines Panel recommends RRSO for carriers of a known BRCA1/2 P/LP variant, typically between 35 and 40 years of age for carriers of a BRCA1 P/LP variant. Since ovarian cancer onset tends to be later in carriers of a BRCA2 P/LP variant, it is reasonable to delay RRSO for management of ovarian cancer risk until between 40 and 45 years of age, unless age at diagnosis in the family warrants earlier age for consideration of this prophylactic surgery.
National Comprehensive Cancer Center Network (NCCN): Genetic/Familial High-	Risk-reducing gastrectomy maximizes reduction in risk for advanced gastric

Risk Assessment: Colorectal, Endometrial, and Gastric. Version 1.2025	cancer and gastric cancer mortality to <1%. In individuals with GAPPS, gastric cancer risk management includes annual gastroscopy beginning at age 15 and consideration of risk-reducing total gastrectomy beginning no earlier than age 30.
National Comprehensive Cancer Center Network (NCCN): Ovarian Cancer/Fallopian Tube Cancer/Primary Peritoneal Cancer Version 2.2025	The prevention benefits of salpingectomy alone are not yet proven. If considered, the fallopian tube from the fimbria to its insertion into the uterus should be removed. In addition, the fallopian tube should be processed and assessed as described above. The concern for risk-reducing salpingectomy alone is that patients are still at risk for developing ovarian cancer. In addition, in premenopausal patients, oophorectomy reduces the risk of developing breast cancer but the magnitude is uncertain

IV. MEDICAL NECESSITY REVIEW

Prior authorization for certain drug, services, and procedures may or may not be required. In cases where prior authorization is required, providers will submit a request demonstrating that a drug, service, or procedure is medically necessary. For more information, please refer to the Priority Health Provider Manual.

V. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- **HMO/EPO:** ***This policy applies to insured HMO/EPO plans.***
- **POS:** ***This policy applies to insured POS plans.***
- **PPO:** ***This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.***
- **ASO:** ***For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.***

- **INDIVIDUAL:** ***For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.***
- **MEDICARE:** ***Coverage is determined by the Centers for Medicare and Medicaid Services (CMS) and/or the Evidence of Coverage (EOC); if a coverage determination has not been adopted by CMS, this policy applies.***
- **MEDICAID/HEALTHY MICHIGAN PLAN:** ***For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.***

VI. DESCRIPTION

Risk-reducing surgery, also known as prophylactic surgery or preventative surgery, involves the removal of tissues or organs before the development of cancer. Prophylactic Cancer Risk Reduction Surgery Includes:

- Prophylactic Hysterectomy: Removal of uterus.
- Prophylactic Mastectomy: Removal of one or both breasts (bilateral). Bilateral risk reducing (RRM) refers to removal of both breasts in asymptomatic patients, while contralateral RRM (CRRM) refers to removal of the unaffected breast when bilateral mastectomy is performed for the management of unilateral breast cancer.
- Prophylactic Oophorectomy: Removal of the ovaries.
- Prophylactic Salpingo-oophorectomy: Removal of the ovaries at the same time of hysterectomy.
- Prophylactic Thyroidectomy: Removal of thyroid glands. See *Thyroid-Related Procedures(#91621)*:
- Prophylactic Total Gastrectomy: Complete removal of stomach.

VII. CODING INFORMATION

A. Mastectomy

ICD-10 Codes that apply:

Z15.01	Genetic susceptibility to malignant neoplasm of breast
Z15.02	Genetic susceptibility to malignant neoplasm of ovary
Z15.09	Genetic susceptibility to other malignant neoplasm
Z40.01	Encounter for prophylactic removal of breast
Z40.09	Encounter for prophylactic removal of other organ
Z40.8	Encounter for other prophylactic surgery
Z41.8	Encounter for other procedures for purposes other than remedying health state

Z41.9 Encounter for procedure for purposes other than remedying health state, unspecified
Z80.3 Family history of malignant neoplasm of breast
Z80.41 Family history of malignant neoplasm of ovary
Z80.49 Family history of malignant neoplasm of other genital organs
Z80.8 Family history of malignant neoplasm of other organs or systems
Z80.9 Family history of malignant neoplasm, unspecified
Z85.3 Personal history of malignant neoplasm of breast
Z85.40 Personal history of malignant neoplasm of unspecified female genital organ
Z85.43 Personal history of malignant neoplasm of ovary

CPT/HCPCS Codes:
19303 Mastectomy, simple, complete

B. Oophorectomy
ICD-10 Codes that apply:
Z15.01 Genetic susceptibility to malignant neoplasm of breast
Z15.02 Genetic susceptibility to malignant neoplasm of ovary
Z15.09 Genetic susceptibility to other malignant neoplasm
Z40.02 Encounter for prophylactic removal of ovary
Z40.03 Encounter for prophylactic removal of fallopian tube(s)
Z40.09 Encounter for prophylactic removal of other organ
Z40.8 Encounter for other prophylactic surgery
Z41.8 Encounter for other procedures for purposes other than remedying health state
Z41.9 Encounter for procedure for purposes other than remedying health state, unspecified
Z80.0 Family history of malignant neoplasm of digestive organs
Z80.3 Family history of malignant neoplasm of breast
Z80.41 Family history of malignant neoplasm of ovary
Z80.49 Family history of malignant neoplasm of other genital organs
Z80.8 Family history of malignant neoplasm of other organs or systems
Z80.9 Family history of malignant neoplasm, unspecified
Z83.71 Family history of colonic polyps
Z85.3 Personal history of malignant neoplasm of breast
Z85.40 Personal history of malignant neoplasm of unspecified female genital organ
Z85.43 Personal history of malignant neoplasm of ovary
Z85.44 Personal history of malignant neoplasm of other female genital organs
Z86.010 Personal history of colonic polyps

CPT/HCPCS Codes:
58661 Laparoscopy, surgical; with removal of adnexal structures (partial or total oophorectomy and/or salpingectomy)
58720 Salpingo-oophorectomy, complete or partial, unilateral or bilateral (separate procedure)
58940 Oophorectomy, partial or total, unilateral or bilateral;

C. Gastrectomy
ICD-10 Codes that apply:

Z15.09 Genetic susceptibility to other malignant neoplasm
Z40.09 Encounter for prophylactic removal of other organ
Z40.8 Encounter for other prophylactic surgery
Z41.8 Encounter for other procedures for purposes other than remedying health state
Z41.9 Encounter for procedure for purposes other than remedying health state, unspecified
Z80.0 Family history of malignant neoplasm of digestive organs

CPT/HCPCS Codes:
43620 Gastrectomy, total; with esophagoenterostomy
43621 Gastrectomy, total; with Roux-en-Y reconstruction
43622 Gastrectomy, total; with formation of intestinal pouch, any type

D. Hysterectomy
ICD-10 Codes that apply:
Z15.04 Genetic susceptibility to malignant neoplasm of endometrium
Z15.09 Genetic susceptibility to other malignant neoplasm
Z40.09 Encounter for prophylactic removal of other organ
Z41.8 Encounter for other procedures for purposes other than remedying health state
Z80.0 Family history of malignant neoplasm of digestive organs
Z80.8 Family history of malignant neoplasm of other organs or systems
Z83.71 Family history of colonic polyps
Z86.010 Personal history of colonic polyps

CPT/HCPCS Codes:
58150 Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(s);
58180 Supracervical abdominal hysterectomy (subtotal hysterectomy), with or without removal of tube(s), with or without removal of ovary(s)
58200 Total abdominal hysterectomy, including partial vaginectomy, with para-aortic and pelvic lymph node sampling, with or without removal of tube(s), with or without removal of ovary(s)
58260 Vaginal hysterectomy, for uterus 250 grams or less;
58262 Vaginal hysterectomy, for uterus 250 grams or less; with removal of tube(s), and/or ovary(s)
58263 Vaginal hysterectomy, for uterus 250 grams or less; with removal of tube(s), and/or ovary(s), with repair of enterocele
58290 Vaginal hysterectomy, for uterus greater than 250 grams;
58291 Vaginal hysterectomy, for uterus greater than 250 grams; with removal of tube(s) and/or ovary(s)
58292 Vaginal hysterectomy, for uterus greater than 250 grams; with removal of tube(s) and/or ovary(s), with repair of enterocele
58294 Vaginal hysterectomy, for uterus greater than 250 grams; with repair of enterocele
58541 Laparoscopy, surgical, supracervical hysterectomy, for uterus 250 g or less;
58542 Laparoscopy, surgical, supracervical hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(s)

58543	Laparoscopy, surgical, supracervical hysterectomy, for uterus greater than 250 g;
58544	Laparoscopy, surgical, supracervical hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(s)
58548	Laparoscopy, surgical, with radical hysterectomy, with bilateral total pelvic lymphadenectomy and para-aortic lymph node sampling (biopsy), with removal of tube(s) and ovary(s), if performed
58550	Laparoscopy surgical, with vaginal hysterectomy, for uterus 250 grams or less;
58552	Laparoscopy surgical, with vaginal hysterectomy, for uterus 250 grams or less; with removal of tube(s) and/or ovary(s)
58553	Laparoscopy, surgical, with vaginal hysterectomy, for uterus greater than 250 grams;
58554	Laparoscopy, surgical, with vaginal hysterectomy, for uterus greater than 250 grams; with removal of tube(s) and/or ovary(s)
58570	Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less;
58571	Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(s)
58572	Laparoscopy, surgical, with total hysterectomy, for uterus greater than 250 g;
58573	Laparoscopy, surgical, with total hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(s)

VIII. REFERENCES

1. American College of Obstetricians and Gynecologists (ACOG). Practice Bulletin No 182: Hereditary Breast and Ovarian Cancer Syndrome. Obstet Gynecol. 2017 Sep;130(3):e110-e126. PMID: 28832484.
2. American College of Obstetricians and Gynecologists (ACOG) Committee Opinion No. 774: Opportunistic Salpingectomy as a Strategy for Epithelial Ovarian Cancer Prevention. Obstet Gynecol. 2019 Apr;133(4):e279-e284.
3. Asif B, Sarvestani AL, Gamble LA, Samaranayake SG, Famiglietti AL, Fasaye GA, Quezado M, Miettinen M, Korman L, Koh C, Heller T, Davis JL. Cancer surveillance as an alternative to prophylactic total gastrectomy in hereditary diffuse gastric cancer: a prospective cohort study. Lancet Oncol. 2023 Apr;24(4):383-391. doi: 10.1016/S1470-2045(23)00057-8. PMID: 36990610; PMCID: PMC10084814.
4. Blair VR, McLeod M, Carneiro F, Coit DG et al. Hereditary diffuse gastric cancer: updated clinical practice guidelines. Lancet Oncol. 2020 Aug;21(8):e386-e397. doi: 10.1016/S1470-2045(20)30219-9. PMID: 32758476; PMCID: PMC7116190.
5. Casey MJ, Synder C, Bewtra C, Narod SA, Watson P, Lynch HT Intra-abdominal carcinomatosis after prophylactic oophorectomy in women of hereditary breast ovarian cancer syndrome kindreds associated with BRCA1 and BRCA2 mutations Gynecol Oncol. 2005 May; 97(2):457-67.

6. Chung L, Broaddus R, Crozier M, Luthraa R, Levenback C, & Lu K. Unexpected Endometrial Cancer at Prophylactic Hysterectomy in a Woman With Hereditary Nonpolyposis Colon Cancer, Obstet. Gynecol., Nov 2003; 102: 1152 - 1155.
7. Corso G, Davis JL, Strong VE. Points to consider regarding prophylactic total gastrectomy in germline CDH1 variant carriers. J Surg Oncol. 2024 May;129(6):1082-1088. doi: 10.1002/jso.27603. Epub 2024 Feb 22. PMID: 38389278.
8. Eisen A; Rebbeck TR; Wood WC; Weber BL Prophylactic surgery in women with a hereditary predisposition to breast and ovarian cancer. J Clin Oncol 2000 May; 18(9):1980-95.
9. Grann VR, Jacobson JS, Whang W, Hershman D, Heitjan DF, Antman KH, Neugut AI. Prevention with tamoxifen or other hormones versus prophylactic surgery in BRCA1/2-positive women: a decision analysis. Cancer J Sci Am. 2000 Jan-Feb; 6(1):13-20.
10. Giuliano AE, Boolbol S, Degnim A, Kuerer H, Leitch AM, Morrow M. Society of Surgical Oncology: position statement on prophylactic mastectomy. Approved by the Society of Surgical Oncology Executive Council, March 2007. Ann Surg Oncol. 2007 Sep;14(9):2425-7. Epub 2007 Jun 28. PMID: 17597344.
11. Hartmann LC, Schaid DJ, Woods JE, Crotty TP, Myers JL, Arnold PG, Petty PM, Sellers TA, Johnson JL, McDonnell SK, Frost MH, Jenkins RB Efficacy of bilateral prophylactic mastectomy in women with a family history of breast cancer. N Engl J Med. 1999 Jan 14; 340(2):77-84.
12. Hansford S, Kaurah P, Li-Chang H, Woo M, Senz J, Pinheiro H, Schrader KA, Schaeffer DF, Shumansky K, Zogopoulos G, Santos TA, Claro I, Carvalho J, Nielsen C, Padilla S, Lum A, Talhouk A, Baker-Lange K, Richardson S, Lewis I, Lindor NM, Pennell E, MacMillan A, Fernandez B, Keller G, Lynch H, Shah SP, Guilford P, Gallinger S, Corso G, Roviello F, Caldas C, Oliveira C, Pharoah PD, Huntsman DG. Hereditary Diffuse Gastric Cancer Syndrome: CDH1 Mutations and Beyond. JAMA Oncol. 2015 Apr;1(1):23-32. doi: 10.1001/jamaoncol.2014.168. Erratum in: JAMA Oncol. 2015 Apr;1(1):110. doi: 10.1001/jamaoncol.2015.0410. PMID: 26182300.
13. Hughes KS, Papa MZ, Whitney T, McLellan R. Prophylactic mastectomy and inherited predisposition to breast carcinoma. Cancer. 1999 Dec 1; 86(11 Suppl):2502-16.
14. Hunt KK, Euhus DM, Boughey JC, Chagpar AB, Feldman SM, Hansen NM, Kulkarni SA, McCready DR, Mamounas EP, Wilke LG, Van Zee KJ, Morrow M. Society of Surgical Oncology Breast Disease Working Group Statement on Prophylactic (Risk-Reducing) Mastectomy. Ann Surg Oncol. 2017 Feb;24(2):375-397. Epub 2016 Dec 8. PMID: 27933411.
15. Jatoi I, Kemp Z. Risk-Reducing Mastectomy. JAMA. 2021 May 4;325(17):1781-1782. doi: 10.1001/jama.2020.22414. PMID: 33944884.

16. King TA, Sakr R, Patil S, et al. Clinical management factors contribute to the decision for contralateral prophylactic mastectomy. *J Clin Oncol*. 2011; 29:2158-2164.
17. Kuschel B, Lux MP, Goecke TO, Beckmann MW. Prevention and therapy for BRCA1/2 mutation carriers and women at high risk for breast and ovarian cancer. Eur J Cancer Prev. 2000 Jun; 9(3):139-50.
18. Lachiewicz MP, Kravochuck SE, O'Malley MM, Heald B, Church JM, Kalady MF, Drake RD. Prevalence of occult gynecologic malignancy at the time of risk reducing and nonprophylactic surgery in patients with Lynch syndrome. Gynecol Oncol. 2014 Feb;132(2):434-7. doi: 10.1016/j.ygyno.2013.10.033. Epub 2013 Nov 5. PMID: 24211399.
19. Meeuwissen PA, Seynaeve C, Brekelmans CT, Meijers-Heijboer HJ, Klijn JG, Burger CW Outcome of surveillance and prophylactic salpingo-oophorectomy in asymptomatic women at high risk for ovarian cancer. Gynecol Oncol. 2005 May; 97(2):476-82.
20. National Comprehensive Cancer Network (NCCN) Guidelines. Breast Cancer Version 4, 2023. March 23, 2023.
21. National Comprehensive Cancer Network (NCCN) Guidelines. Gastric Cancer. Version 1, 2023, March 10, 2023.
22. National Comprehensive Cancer Network (NCCN) Guidelines. Genetic/Familial High-Risk Assessment Breast, Ovarian, and Pancreatic. Version 3.2023, Feb 13, 2023.
23. National Comprehensive Cancer Network (NCCN) Guidelines. Genetic/Familial High-Risk Assessment: Colorectal (V.2.2021), April 26, 2022.
24. National Comprehensive Cancer Network (NCCN) Guidelines. Ovarian CancerIncluding Fallopian Tube Cancer and Primary Peritoneal Cancer Version 2.2023. June 2, 2023.
25. Newman LA; Kuerer HM; Hung KK; Vlastos G; Ames FC; Ross MI; Singletary SE. Prophylactic mastectomy. J Am Coll Surg. 2000 Sep; 191(3):322-30.
26. Pandalai PK, Lauwers GY, Chung DC, Patel D, Yoon SS. Prophylactic total gastrectomy for individuals with germline CDH1 mutation. Surgery. 2011 Mar;149(3):347-55. doi: 10.1016/j.surg.2010.07.005. Epub 2010 Aug 17. PMID: 20719348.
27. Powell CB. Clinical management of patients at inherited risk for gynecologic cancer. Curr Opin Obstet Gynecol. 2015 Feb;27(1):14-22. doi: 10.1097/GCO.0000000000000143. PMID: 25490378.
28. Rebbeck TR, Lynch HT, Neuhausen SL, Narod SA, Van't Veer L, Garber JE, Evans G, Isaacs C, Daly MB, Matloff E, Olopade OI, Weber BL; Prevention and Observation of Surgical End Points Study Group. Prophylactic oophorectomy in carriers of BRCA1 or BRCA2 mutations N Engl J Med. 2002 May 23; 346(21):1616-22. Epub 2002 May 20.
29. Robertson G Screening for endometrial cancer. Med J Aust. 2003 Jun 16; 178(12):657-9.

30. Sakorafas GH, Tsiotou AG. Prophylactic mastectomy; evolving perspectives. Eur J Cancer. 2000 Mar; 36(5):567-78.
31. Schmeler KM, Lynch HT, Chen LM, Munsell MF, Soliman PT, Clark MB, Daniels MS, White KG, Boyd-Rogers SG, Conrad PG, Yang KY, Rubin MM, Sun CC, Slomovitz BM, Gershenson DM, Lu KH. Prophylactic surgery to reduce the risk of gynecologic cancers in the Lynch syndrome. N Engl J Med. 2006 Jan 19;354(3):261-9. doi: 10.1056/NEJMoa052627. PMID: 16421367.
32. Society of Gynecologic Oncology (SGO). SGO Clinical Practice Statement: Salpingectomy for Ovarian Cancer Prevention. Available at https://www.sgo.org/clinical-practice/guidelines/sgo-clinical-practice-statement-salpingectomy-for-ovarian-cancer-prevention/ (Accessed July 14, 2025).
33. Terry MB, Daly MB, Phillips KA, et al. Risk-reducing oophorectomy and breast cancer risk across the spectrum of familial risk. J Natl Cancer Inst. 2019;111(3):331-334.
34. Treese C, Siegmund B, Daum S. Hereditary Diffuse Gastric Cancer-Update Based on the Current Consort Recommendations. Curr Oncol. 2022 Mar 30;29(4):2454-2460. doi: 10.3390/curroncol29040199. PMID: 35448173; PMCID: PMC9029010.
35. Tung NM, Boughey JC, Pierce LJ, et al. Management of Hereditary Breast Cancer: American Society of Clinical Oncology, American Society for Radiation Oncology, and Society of Surgical Oncology Guideline. J Clin Oncol. 2020 Jun 20;38(18):2080-2106. doi: 10.1200/JCO.20.00299. Epub 2020 Apr 3. PMID: 32243226.
36. Underkofler KA, Ring KL. Updates in gynecologic care for individuals with lynch syndrome. Front Oncol. 2023 Mar 1;13:1127683. doi: 10.3389/fonc.2023.1127683. PMID: 36937421; PMCID: PMC10014618.
37. van Roosmalen MS, Verhoef LC, Peep PF, et al. Decision analysis of prophylactic surgery or screening for *BRCA1* mutation carriers: a more prominent role for oophorectomy. J Clin Oncol. 2002; 20(8):2092-2100.
38. Vogel VG. Breast cancer prevention: a review of current evidence. CA Cancer J Clin. 2000 May-Jun; 50(3):156-70.
39. Vos EL, Salo-Mullen EE, Tang LH, Schattner M, Yoon SS, Gerdes H, Markowitz AJ, Mandelker D, Janjigian Y, Offitt K, Coit DG, Stadler ZK, Strong VE. Indications for Total Gastrectomy in CDH1 Mutation Carriers and Outcomes of Risk-Reducing Minimally Invasive and Open Gastrectomies. JAMA Surg. 2020 Nov 1;155(11):1050-1057. doi: 10.1001/jamasurg.2020.3356. PMID: 32997132; PMCID: PMC7527942.
40. Mattavelli F, Seregni E, Collini P, et al. Prophylactic thyroidectomy in MEN 2A syndrome. Tumori. 2003 Sep-Oct;89(5):553-5.
41. U.S. Preventive Services Task Force (USPSTF). Recommendation Statement Genetic Risk Assessment and BRCA Mutation Testing for Breast and Ovarian Cancer Susceptibility U.S. Preventive Services Task Force (USPSTF). Ann Intern Med. 2005;143:355-61.

42. Walker JL, Powell CB, Chen LM, Carter J, Bae Jump VL, Parker LP, Borowsky ME, Gibb RK. Society of Gynecologic Oncology recommendations for the prevention of ovarian cancer. Cancer. 2015 Jul 1;121(13):2108-20. doi: 10.1002/cncr.29321. Epub 2015 Mar 27. PMID: 25820366.