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Society of Family Planning Clinical Recommendation: Contraceptive considerations for individuals with cancer and cancer survivors part 2 – Breast, ovarian, uterine, and cervical cancer☆,☆☆

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ABSTRACT

This Clinical Recommendation provides evidence-informed, person-centered, and equity-driven recommendations to facilitate the management of and access to contraceptive care for individuals who are diagnosed with, being actively treated for, or who have previously been treated for breast, ovarian, uterine, or cervical cancer. For individuals with a history of breast cancer, we recommend nonhormonal contraceptives as the first-line option (GRADE 1B); additional guidance is provided for hormonal contraception depending on breast cancer hormone receptor status. For individuals with a history of or active ovarian cancer, we recommend clinicians provide access to all available contraceptive methods utilizing a person-centered approach (GRADE 1B); in individuals diagnosed with hormonally-sensitive ovarian malignancies, such as adult granulosa cell tumors, low-grade serous, and endometrioid adenocarcinomas, who are considering hormonal contraception, we suggest shared decision-making with the individual and their oncologist (GRADE 2C). Estrogen-containing contraceptives should be avoided by individuals treated with estrogen-blocking therapy (BEST PRACTICE). For individuals with a history of endometrial cancer, we recommend clinicians provide access to all available contraceptive methods utilizing a person-centered approach (GRADE 1B); in individuals with active endometrial cancer requesting an intrauterine device (IUD), we suggest shared decision-making with the individual and their oncologist (GRADE 1B). Recommendations for individuals with gestational trophoblastic disease are provided based on factors such as evidence of persistent intrauterine disease, human chorionic gonadotropin (hCG) levels, and the individual's preferred contraceptive method. For individuals with cervical dysplasia or a history of cervical cancer, we suggest clinicians provide access to all available contraceptive methods (GRADE 2B); we suggest against IUD placement in individuals with active cervical malignancy (GRADE 2C). This document is part 2 of a three-part series that updates the Society of Family Planning's 2012 *Cancer and contraception* clinical guidance. It builds upon the considerations outlined in the *Society of Family Planning Committee Statement: Contraceptive considerations for individuals with cancer and cancer survivors part 1 – Key considerations for clinical care* and

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Disclaimer: This publication is designed as a resource to assist clinicians in providing family planning care. It should not be considered inclusive of all proper treatments or serve as the standard of care. It is not intended to substitute for the independent professional judgment of the treating clinician. Variations, recognizing individual circumstances, may be appropriate. This publication reflects the best-available evidence at the time of publication, recognizing that continued research or major changes in the practice environment may impact future recommendations and should be evaluated for incorporation into care. Clinical guidance, grounded in evidence-based research, are distinct from legal requirements and restrictions governing family planning care. Medical recommendations do not vary based on practice location. However, abortion is not legal in all states and circumstances, and this document is not intended to aid in or otherwise advocate for unlawful care. Any updates to this document can be found on https://societyfp.org/clinical/clinical-guidance-library/. The Society and its contributors provide the information contained in this publication "as is" and without any representations or warranties, express or implied, of any kind, whether of accuracy, reliability, or otherwise.

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parallels recommendations outlined in the *Society of Family Planning Clinical Recommendation: Contraceptive considerations for individuals with cancer and cancer survivors part 3 – Skin, blood, gastrointestinal, liver, lung, central nervous system, and other cancers*. Readers are encouraged to review parts 1 and 3 for this additional context.

1. Background

This Clinical Recommendation provides evidence-informed, person-centered, and equity-driven recommendations to facilitate the management of and access to contraceptive care for individuals who are diagnosed with, being actively treated for, or who have previously been treated for breast, ovarian, uterine, or cervical cancer. It builds upon the considerations outlined in the *Society of Family Planning Committee Statement: Contraceptive considerations for individuals with cancer and cancer survivors part 1 – Key considerations for clinical care* and parallels recommendations outlined in the *Society of Family Planning Clinical Recommendation: Contraceptive considerations for individuals with cancer and cancer survivors part 3 – Skin, blood, gastrointestinal, liver, lung, central nervous system, and other cancers* [1,2]. Readers are encouraged to review parts 1 and 3 for this additional context.

When literature regarding the safety and efficacy of specific contraceptive methods in individuals with a history of a particular type of cancer was not available, literature from the general population was used to inform recommendations. No well-designed studies assessing contraceptive risks in those actively undergoing cancer treatment are available. Thus, recommendations for those with a history of a specific cancer type also apply to those who are actively being treated for that cancer. However, active cancer is often associated with higher risks of thrombosis, which needs to be taken into consideration during shared decision-making if contraceptives that increase thrombotic risks are considered while the individual is receiving treatment.

This guidance series uses shared decision-making to refer to a collaborative process in which individuals receiving care and clinicians work together to make health care decisions informed by evidence, the care team's knowledge and experience, and the individual's values, goals, preferences, and circumstances. It uses person-centered care to refer to care that is respectful of and responsive to the individual's preferences, needs, and values, ensuring that these elements guide all clinical decisions. These principles are fundamental to contraceptive care and all recommendations in this guidance series should be interpreted in this context. This guidance discusses providing contraceptive methods to an individual with a US Centers for Disease Control and Prevention (CDC) medical eligibility criteria (MEC) condition or characteristic with an unacceptable risk (category 4). Typically, this should only occur in rare circumstances and when no safer alternative or acceptable method exists. Ultimately, the acceptability of risk should be determined by the individual. Clinicians can support an individual's understanding of risk through shared decision-making.

2. Clinical questions

Breast cancer

2.1. How does the use of hormonal contraception impact the effectiveness of breast cancer treatment or the risk of breast cancer recurrence?

For individuals with a history of breast cancer, we recommend nonhormonal contraceptives as the first-line option (GRADE 1B) (Table 1). For individuals with hormone receptor-positive breast cancer, we recommend avoiding or minimizing hormone exposure (GRADE 1C). For individuals with hormone receptor-negative breast cancer who prefer hormonal contraception, we recommend shared decision-making with the individual and their oncologist (GRADE 1C).

The evidence on the impact of exogenous hormone use on the risk of new-onset or recurrence of breast cancer is complex. Recent evidence suggests that currently available hormonal contraception, including progestin-only methods such as the levonorgestrel (LNG) 52 mg intrauterine device (IUD), may be associated with a small absolute increase in breast cancer diagnosis, roughly one additional cancer diagnosis per 7690 users per year [3–7]. There is insufficient evidence on the relative breast safety of the lower-dose LNG IUDs. No prospective studies assess the safety of hormonal contraception in breast cancer survivors. However, a retrospective study including all hormonal contraception methods shows no differences in all-cause mortality or breast cancer recurrence among users [8]. In contrast, two randomized trials of hormone therapy use in menopausal breast cancer survivors show conflicting results, with one demonstrating no increased risk and the other some increased risk; multiple observational studies suggest neutral or decreased breast cancer recurrence risk with menopausal hormone use [9]. A systematic review and meta-analysis suggests that pregnancy after breast cancer is unlikely to increase mortality and may be associated with an increased likelihood of disease-free and overall survival. Nonetheless, pregnancy prevention is typically recommended for at least 10 months and ideally for 2 years after diagnosis [10,11]. After

Table 1
Key for GRADE recommendations[a]

Symbol	Meaning
1	Strong recommendation
2	Weaker recommendation
A	High quality evidence
B	Moderate quality evidence
C	Low quality evidence, clinical experience, or expert consensus
Best Practice	A recommendation in which either (1) there is an enormous amount of indirect evidence that clearly justifies a strong recommendation; direct evidence would be challenging and an inefficient use of time and resources to bring together and carefully summarize, or (2) a recommendation to the contrary would be unethical

[a] Society of Family Planning Clinical Recommendations use a modified GRADE system. The GRADE system is described in several publications, with a comprehensive set of articles in the Journal of Clinical Epidemiology (J Clin Epidemiology, (2011) 64:383–394, 64:395–400, 64:401–406, 64:407–415, 64:1277–1282, 64:1283–1293, 64:1294–1302, 64:1303–1312, 64:1311–1316, (2013) 66:140–150, 66: 151–157, 66:158–172, 66:173–183, 66:719–725, 66:726–735).

hormone receptor-positive breast cancer diagnosis, a nonhormonal contraceptive method is often recommended, especially when treatment includes prolonged estrogen deprivation. Of the nonhormonal methods, the copper IUD is the most effective option for preventing pregnancy. For hormone receptor-negative breast cancers, methods that minimize hormone exposure are often recommended by oncologists, although there is no evidence to suggest increased risks of adverse outcomes with hormonal contraception. It is unclear if the use of the LNG 52 mg IUD impacts long-term breast cancer recurrence. The LNG 52 mg IUD significantly reduces the risk of endometrial polyps. For individuals taking tamoxifen, which increases the risk of endometrial polyps, this can be an important benefit to consider in selecting a contraceptive method [12]. However, there is no evidence that the LNG 52 mg IUD would decrease endometrial cancer risks in premenopausal tamoxifen users.

2.2. Does the use of hormonal contraception increase the risk of new-onset breast cancer for those at increased risk for familial or hereditary breast and ovarian cancer?

For individuals at significantly increased risk for familial or hereditary breast and ovarian cancer (HBOC), we recommend clinicians provide access to all available contraceptive methods utilizing a person-centered approach (GRADE 1B).

Validated models and genetic testing now allow widespread identification of those at significantly increased risk for familial or hereditary breast and ovarian cancer (HBOC). Individuals at high risk for breast cancer without a personal history can be safely offered hormonal contraception regardless of genetic risk [5,13,14]. Combined hormonal contraceptives (CHC) have been associated with significant reductions in both ovarian and endometrial cancer in those who carry a pathogenic variant in *BRCA1* or *BRCA2*, and longer duration of use is associated with greater protection [5]. Less data for ovarian cancer prevention is available for newer, lower dose or progestin-only formulations. Meta-analyses and systematic reviews have shown either minimal or no increase in breast cancer risk in individuals with genetic risk for breast or ovarian cancer using formulations of 35 μg ethinyl estradiol or less [5,15]. Shared decision-making is key when working with individuals at high risk for breast cancer. The CDC MEC places no restrictions on hormonal contraceptive use by those who are high-risk, without current or recent personal history of breast cancer [13]. In those who carry genetic variants increasing both breast and ovarian cancer risk, the balance of the small potential for increased breast cancer risk and considerably decreased ovarian cancer risk should be discussed.

Ovarian cancer

2.3. Does the use of hormonal or permanent contraception impact outcomes in those who have completed ovarian cancer treatment or are at very high risk of ovarian cancer?

For individuals with a history of or active ovarian cancer, we recommend clinicians provide access to all available contraceptive methods utilizing a person-centered approach (GRADE 1B). For individuals at high risk for ovarian cancer, we recommend clinicians offer hormonal contraception with the goal of ovarian suppression for ovarian cancer prevention (GRADE 1B). For individuals diagnosed with hormonally-sensitive ovarian malignancies, such as adult granulosa cell tumors, low-grade serous, and endometrioid adenocarcinomas, who are considering hormonal contraception, we suggest shared decision-making with the individual and their oncologist (GRADE 2C). Estrogen-containing contraceptives should be avoided by individuals treated with estrogen-blocking therapy (Best Practice).

Data from both the general population and individuals who carry germline pathogenic *BRCA1* and *BRAC2* genes can help inform contraceptive decisions among individuals with a history of ovarian cancer, as data specific to individuals with a personal history of ovarian cancer are not available.

2.3.1. Combined hormonal contraceptives (CHCs)

Estrogen and progestin-containing CHCs have consistently been shown to halve the risk of ovarian cancer diagnosis, both in the general population as well as in those who carry germline pathogenic variants in *BRCA1* and *BRCA2* genes [5,14,16]. Increased duration of hormonal contraception use leads to more protective benefits, regardless of the formulation [17].

2.3.2. Depot medroxyprogesterone acetate (DMPA)

Studies of non-oral hormonal contraception formulations' effect on ovarian cancer are more limited. A systematic review of DMPA injection users showed a reduction in ovarian cancer diagnosis (OR, 0.65; 95% CI, 0.50–0.85) [18].

2.3.3. Progestin-only pills

Low-dose progestin-only pills, which less reliably suppress ovulation, have not consistently been shown to lower the risk of ovarian cancer [17]. Given that different progestin-only methods have variable effects on ovulation suppression, more studies are needed to understand the relationship between ovulation and ovarian cancer prevention.

2.3.4. Intrauterine devices (IUDs)

Hormonal IUDs may have a role in ovarian cancer prevention; a large prospective cohort study reported a 50% risk reduction in ovarian cancer with use of a hormonal IUD, a level of risk reduction similar to the use of oral contraceptives, though meta-analyses have mixed findings [19–21].

2.3.5. Permanent contraception

Laparoscopic sterilization using tubal occlusion techniques such as electrosurgical desiccation, a silicone band, or a titanium clip and partial or complete salpingectomy (removal of bilateral fallopian tubes) have been associated with lower rates of ovarian cancer [22,23]. Complete salpingectomy has the potential for greater ovarian cancer risk reduction and should be considered when laparoscopic sterilization is planned, and ovarian cancer risk reduction is desired [24].

Given the neutral or protective benefits of hormonal contraception, most individuals with a history of epithelial or borderline ovarian cancer, with retained ovaries, can safely use any hormonal contraceptive [13,25]. Less common ovarian cancer subtypes may be estrogen sensitive, such as adult granulosa cell tumors, low-grade serous, or endometrioid adenocarcinomas [26]. Prior use of oral contraception in those diagnosed with granulosa cell tumors has been associated with improved survival rates [27]. Clinicians should engage in shared decision-making with the individual and their oncology team when those with hormonally-sensitive ovarian cancer subtypes are considering hormonal contraception. Active ovarian cancer increases the risk of thrombosis, which should also be considered.

Uterine cancer

2.4. Does the use of hormonal contraception or intrauterine devices impact the effectiveness of uterine cancer treatment or increase the risk of uterine cancer recurrence or morbidity?

Endometrial cancer

For individuals with a history of endometrial cancer, we recommend clinicians provide access to all available contraceptive methods utilizing a person-centered approach (GRADE 1B). For individuals with active endometrial cancer requesting an IUD, we suggest shared decision-making with the individual and their oncologist (GRADE 1B).

When uterine preservation is planned in the setting of endometrial carcinoma, hormonal therapies may offer effective contraception. The

2024 CDC MEC categorizes active endometrial cancer as an unacceptable risk (category 4) for copper and LNG IUD initiation due to concerns about increased risk for infection, perforation, or bleeding during placement [13]. However, evidence supports the initiation of LNG 52 mg IUD in early-stage endometrial cancer when fertility or uterine preservation is desired due to its documented beneficial effect on the endometrium [28,29]. Oncologists and reproductive health clinicians should address how hormonal therapies may serve as both cancer treatment and contraception. Among individuals with Lynch syndrome, both CHCs and progestin-only contraceptives have demonstrated protective effects on the endometrium [30].

Gestational trophoblastic disease

For individuals with gestational trophoblastic disease, after uterine evacuation and in the absence of persistent intrauterine disease, we recommend clinicians provide access to all available contraceptive options utilizing a person-centered approach (GRADE 1A). For individuals with gestational trophoblastic disease who have persistently elevated human chorionic gonadotropin (hCG) levels or evidence of intrauterine disease and request an IUD, we suggest shared decision-making with the individual and their oncologist (GRADE 2C).

Avoidance of unintended pregnancy following treatment of gestational trophoblastic disease (GTD) is important because trends in human chorionic gonadotropin (hCG) values are used to monitor treatment success, recurrence, and the presence of invasive disease. When a hydatidiform molar gestation is suspected, any contraceptive method can safely be initiated immediately after uterine evacuation. CHCs inhibit pituitary production of hCG, reducing the chance that pituitary hCG is falsely attributed to GTD in individuals over 40 years. Hormonal contraception use does not confer an increased risk of post-molar gestational trophoblastic neoplasia and can be initiated immediately following uterine evacuation [31–33]. The 2024 CDC MEC categorizes GTD with concern for persistent or recurrent intrauterine disease as an unacceptable risk (category 4) for copper and LNG IUD initiation, citing theoretical concerns about infection, bleeding, and perforation [13]. However, the risk of IUD placement may be lower than the risk of adverse outcomes due to pregnancy in the setting of GTD. Thus, shared decision-making is critical for individuals in this population who request an IUD.

Cervical cancer

2.5. Does the use of hormonal contraception or intrauterine devices impact the effectiveness of cervical cancer treatment or increase the risk of cervical cancer recurrence?

For individuals with cervical dysplasia or a history of cervical cancer, we suggest clinicians provide access to all available contraceptive methods utilizing a person-centered approach (GRADE 2B). We suggest against IUD placement in individuals with active cervical malignancy (GRADE 2C).

Prospective trials controlling for human papillomavirus status provide inconsistent results regarding the relationship between cervical cancer and contraceptive use [34]. Use of hormonal contraception may be associated with a small increase in the risk of developing cervical cancer, with reported relative risks between 1.1 to 2.2 compared to nonusers [35–37]. However, recent or past use of a hormonal or nonhormonal IUD has not been found to correlate with risk of precancerous lesions, and current use of a nonhormonal IUD may be protective against the development of invasive cervical cancer [38–40]. Hormonal contraceptive use does not appear to increase the risk of recurrence after excision of high-grade cervical lesions [41]. There are no studies to guide the use of contraceptives in individuals with adenocarcinoma in situ or invasive cervical cancer. When a new diagnosis of invasive cervical cancer is made or when conservative management is planned, all contraceptive methods, including IUDs, may be continued. Placement of an IUD for an individual with active cervical malignancy is not recommended due to theoretical concerns of disrupting the tumor, seeding, bleeding, and infection [13]. Contraception is especially important in those undergoing pelvic radiation to prevent pregnancy complications.

3. Summary of recommendations

Please see Table 1 for a key to interpreting GRADE.

Personal cancer history[a]	Recommendation[b]
Breast	
Hormone receptor-positive	Nonhormonal contraceptives first-line option (1B). Avoid or minimize hormone exposure (1C).
Hormone receptor-negative	Nonhormonal contraceptives first-line option (1B). SDM[c] for HC use (1C).
Increased risk for familial or hereditary breast and ovarian cancer (HBOC)	Provide access to all available contraceptive methods (1B).
Ovary	
History of or active ovarian cancer	Provide access to all available contraceptive methods (1B). SDM for HC use for hormonally-sensitive ovarian malignancies such as adult granulosa cell tumors, low-grade serous, and endometrioid adenocarcinomas (2C).
High-risk for ovarian cancer	Offer HC with the goal of ovarian suppression for ovarian cancer prevention (1B).
Treated with estrogen-blocking therapy	Avoid estrogen-containing contraceptives (Best Practice).
Uterus	
History of endometrial cancer	Provide access to all available contraceptive methods (1B).
Active endometrial cancer	SDM for IUD use (GRADE 1B).
History of or active gestational trophoblastic disease	Provide access to all available contraceptive methods after uterine evacuation in the absence of persistent intrauterine disease (1A). SDM for IUD use if persistently elevated hCG levels or evidence of intrauterine disease (2C).
Cervix	
History of cervical cancer or active cervical dysplasia	Provide access to all available contraceptive methods (2B).
Active cervical malignancy	Suggest against IUD placement (2C).

HC, hormonal contraception; hCG, human chorionic gonadotropin; IUD, intrauterine device; SDM, shared decision-making.

[a] Active cancer treatment (as opposed to past cancer history) may increase the risk of thrombosis, and should be included in clinical decision-making.

[b] Clinicians should provide person-centered contraceptive care that supports autonomy in decision-making for the individual receiving care and counseling directly tailored to the individual's expressed preferences and values.

[c] Shared decision-making with the individual and their oncologist.

4. Recommendations for future research

- Safety of hormonal contraception after breast cancer by cancer subtype.
- The relationship between ovarian cancer prevention and the impact of a contraceptive method on ovulatory suppression, including how effectively different doses or formulations may impact ovulation.
- IUD use after fertility-sparing treatment for cervical cancer.
- How placement of an IUD affects clinical outcomes with active cervical cancer and active endometrial cancer.
- Effects of different contraceptive methods on an individual's experiences with cancer treatment.

5. Sources

A series of clinical questions were developed by the authors and representatives from the Society of Family Planning's Clinical Affairs Committee. With the assistance of medical librarians, we searched

the databases of Medline, Embase, Cochrane reviews and registered clinical trials to identify any relevant articles related to cancer and contraception, published between January 1, 2012 and June 29, 2023. The initial search yielded over 16,000 results, which were further limited to those relevant to hormonal contraception. We reviewed 5484 references for relevance and to use in drafting the recommendations. The search was restricted to articles published in English. We also identified studies by reviewing the references of relevant articles and clinical guidelines published by organizations or institutions with related recommendations, such as the Centers for Disease Control and Prevention, the American College of Obstetricians and Gynecologists, and the Society of Family Planning. The content of and references cited in relevant product labels and Food and Drug Administration prescribing information were also considered when developing critical statements on topics involving medication. When relevant evidence was not available or too limited to inform practice, the expert opinion of clinicians with complex family planning expertise was used to develop the clinical statements.

6. Intended audience

This Clinical Recommendation is intended for Society of Family Planning members, family planning and reproductive health service clinicians, oncologists and clinicians who care for cancer survivors, family planning and reproductive health researchers, consumers of family planning care, and policymakers.

CRediT authorship contribution statement

Schwarz Eleanor Bimla: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Batur Pelin:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Formal analysis, Data curation, Conceptualization. **Brant Ashley:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **McCourt Carolyn:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization.

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The North American Society for Pediatric and Adolescent Gynecology endorses this document.

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