FAMILY PLANNING ALLIANCE AUSTRALIA

Progestogen-only contraception and breast cancer

Background

A 2023 study showed a slight increase in the risk of breast cancer in current and recent users of progestogen-only contraception. This risk was similar across all the progestogen-only methods. All increases in risk were statistically significant except for the contraceptive implant, where there were only a small number of cases.(1) The results align with prior research that has shown a possible association between the use of the 52 mg levonorgestrel IUD (Mirena) and the risk of breast cancer (2, 3). The study also reaffirmed a comparable risk for users of combined hormonal contraception, as previously established.(4, 5) Evidence regarding breast cancer mortality in progestogen-only users is currently unavailable, although users of combined hormonal contraception do not face an increased risk of breast cancer mortality.(6)

When using hormonal contraception, the relative risk of breast cancer increases by around 20-30%, which results in only a small number of additional breast cancers, particularly in young users. The background risk of breast cancer increases with age and diagnosis is extremely rare before the age of 30 years. The 2023 study estimates that if 100,000 people aged 16-20 used a hormonal method of contraception for 5 years there would be 2.8 breast cancers diagnosed during that time and 2.2. per 100,000 in non-users of the same age over the same time period. For users aged 35-39 years, the corresponding figures are 398.0 per 100,000 for users of hormonal contraception compared to 313.4 per 100,000 in non-users of the same age over 5 years. After stopping hormonal contraception, a residual increased risk of breast cancer remains but decreases with time and approaches no increased risk 5-9 years after stopping. (1)

Footnote: The Medical Advisory Committee of Family Planning Alliance Australia is comprised of senior medical educators, senior medical officers, and medical directors of the member family planning organisations. The Clinical Reference Group of the Medical Advisory Committee exists as a means to review current clinical practice and provide evidence and consensus-based recommendations for use by clinicians where clinical guidance is lacking.

The table below estimates the risk of breast cancer for all hormonal contraceptives based on the risks for oral combined and progestogen-only contraception.

Table 1: Estimated additional breast cancers over a 15-year period if a person uses a hormonal method of contraception for 5 years and then does not use hormonal contraception for the following 10 years.

Age when hormonal contraception used	Number of cancers expected in 100,00 nonusers	Number of cancers expected in 100,00users	Additional number of cancers	Number of additional cancers per user
16-19 years	84.1	92.5	8.4	1 per 12,000
20-24 years	199.0	220.2	21.4	1 per 4500
25-29 years	504.7	565.8	61.1	1 per 1,500
30-34 years	1072.3	1210.3	138	1 per 700
35-39 years	1952.9	2218.0	265.1	1 per 400

Adapted from: "Estimated excess incidence of breast cancer per 100,000 women within England associated with five years use of any oral contraceptive, by age at first use."(1)

Breast cancer is a complex disease and several modifiable factors contribute to it including alcohol intake and obesity. (7) Consequently, any risks associated with the use of hormonal methods of contraception must be balanced against their considerable benefits.

In Australia progestogen-only methods available include the progestogen-only pill, the contraceptive injection, the implant and the intrauterine device. They have few contraindications and are safe choices for those with a past history or risk factors for deep vein thrombosis or cardiovascular disease and can be used during lactation.(8) Numerous studies indicate that the use of the 52 mg LNG IUD is associated with a decreased risk of endometrial cancer, and may also reduce the risk of both cervical and ovarian cancers. (9)

Long-acting reversible methods such as hormonal IUDs and the etonogestrel implant are not only highly effective but also liked by users. (10) Mirena is very effective for heavy menstrual bleeding and dysmenorrhoea and has beneficial effects on endometriosis and adenomyosis. (11-17).

Recommendations

Inform potential users of progestogen-only methods:

- there appears to be a slight increase in risk of breast cancer during use of progestogen-only methods
- the risk of breast cancer varies with age, with the background risk being very low for those aged under 30 years
- the excess risk related to the use of progestogen-only methods appears to decrease with time after discontinuation
- progestogen-only methods offer numerous benefits
- hormonal contraception is just one of several factors influencing breast cancer risk, and other modifiable factors should be taken into consideration.

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