Understanding the treatment of breast cancer in young women

By Dr Fatima Hoosain

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While uncommon, breast cancer in young women remains worthy of special attention due to the unique and complex clinical and biological issues it raises.

Source: Supplied. Dr Fatima Hoosain.

Although the incidence of breast cancer increases with age (most sufferers are diagnosed after the age of 40), between 5% and 7% of breast cancers are diagnosed in women under the age of 40 in the developed world.

In the developing world, this is substantially higher with up to one in six women diagnosed under the age of 40. This is primarily due to the younger age structure of developing countries and not a fundamental difference in biology.

With several factors known to increase one's potential risk for breast cancer (prolonged exposure to oestrogen, obesity, sedentary lifestyle, pregnancy after the age of 30 and the omission of breastfeeding), genetic factors appear to play a far more significant role when it comes to young women.

Some of these are:

- A personal history of breast cancer.
- A family history of breast, ovarian or prostate cancer (especially if it was diagnosed at an early age or if multiple first-line family members have been diagnosed).
- A family history that is suggestive of, or in keeping with, a genetic syndrome that may put them at a higher risk for breast cancer (breast cancer diagnosed before age 50, ovarian cancer at any age, triple negative breast cancer, bilateral breast cancer, male breast cancer, pancreatic cancer, early and aggressive prostate cancer or a multitude of cancers of different organs in both men and women in the family).
- A history of radiation therapy to the chest.
- A known genetic mutation that confers a high risk for the development of breast cancer, such as TP53.
- Ashkenazi Jewish ancestry (one in 40 Ashkenazi Jews carry mutations in BRCA1 or BRCA2).

According to some schools of thought, breast cancer in young women should be considered a distinctly separate entity as it often differs quite significantly from cancers arising in older women (40+) in terms of causes and behavior and even response to treatment.

Diagnostic screening challenges

In terms of diagnosis, the difference between older women and younger women is that younger patients are not included in screening programmes. In addition to this problem, the work-up for breast abnormalities may also be slower because of delays in presentation either by patients or by healthcare providers.

Many young women don't think breast cancer can occur at a young age or doctors can use a "wait and watch" approach to breast lumps in this age group as most of them are benign. The high-density of the breast tissue in young women also limits the diagnostic sensitivity of the mammography.

Due to these factors, presentation and diagnosis in younger women can occur at a far more advanced stage of the disease than in older women who have regular screenings and where healthcare providers treat lumps as more suspicious.

Breast cancer in younger women also differs in terms of biological characteristics and therapeutic options.

When it comes to biological characteristics, tumours have a higher proliferation rate (Ki-67), are more likely to be a Grade 3 and are often oestrogen receptor negative. Patients are also more likely to have a BRCA1/2 mutation.

In younger women, the prognosis is worse in oestrogen receptor positive breast cancer.

Differences in treatment approaches

When it comes to therapeutic interventions, local therapy for breast cancer in younger women is very important as there is a much higher chance of recurrence of the breast cancer on the same side and thus a far higher importance is placed on removing both the tumour and adequate tissue around it.

Boost radiotherapy (an additional radiotherapy dose directed to where the cancer was) should also be considered.

It is preferred that chemotherapy be administered after surgery in this population group as it has been found that this leads to less chemotherapy-induced menstruation cessation and it can lead to greater benefits from overall chemotherapy treatment.

In the younger group of patients, it has also been found that those placed on the supplemental hormonal therapy Tamoxifen have a higher risk of developing resistance to this drug.

Younger women often experience chemotherapy-induced premature ovarian failure; this means loss of fertility as well as higher emotional distress and poorer quality of life.

Areas of special consideration

The management of breast cancer in young women though does include similar treatments to older age groups. These include chemotherapy, endocrine therapy, radiation therapy, biological agents and surgical options, with young women benefiting from a multi-disciplinary approach due to their treatment requiring complex consideration and, at times, a more aggressive approach.

Other areas also requiring special consideration include fertility, pregnancy, bone health, genetics (and the risk for other diseases), menopausal symptoms related to treatment and sexual dysfunction.

Psychosocial issues also need to be factored in with many of these women having young families and often playing a critical role in the financial stability of the home.

However, all is not lost. Important measures can help mitigate not only the risk of breast cancer, but that of most cancers.

The following is a short list for younger women to follow:

- If they have a suggestive family history, genetic counseling and testing can help to identify the underlying issue that, in turn, could help guide their future screening and lead to preventative action.
- They should do a monthly breast self-examination, and seek help early should they have any cause for concern or notice any problem. Approximately 90% of cancers diagnosed at an early stage can be cured!

- Not smoking, exercise and following a healthy diet - including avoiding alcohol - goes a long way in preventing cancer. Exercise can reduce a breast cancer risk by up to 30%.

ABOUT THE AUTHOR

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