

Ovarian Cancer Screening

Where Are We Now?

There are times when we lose a friend or a loved one to cancer. As medical professionals we often feel helpless when faced with this situation. Did he or she actually go for their annual screens? Where was the treatment done? Did they actually seek medical help or did they leave it to supernatural powers and traditional healers (common in our country).

How Can We Contribute to Reduce the Incidence of Cancer in the Country?

The recently released Malaysian National Cancer (MNCR) registry report 2012-2016 raises concerns regarding cancer cases and the report demonstrates a significant rise in newly diagnosed cancers. There is a rise in the incidence rate by 2.3 per 100000 population in females when compared to the previous report between 2007 and 2011 (Figure 1).

There have been some positive outcomes in the early detection of cervical cancer

Cancers of the breast, colorectal, cervix uteri, ovary, corpus uteri, lymphoma, thyroid, leukaemia and skin (non-melanoma) were the 10 most common cancers among females (Figure 2). The Ministry of Health (MOH) and some NGOs have made great strides in screening and raising awareness but sometimes the very nature of the disease limits progress.

There have been some positive outcomes in the early detection of cervical cancer. Its incidence rate has dropped from 7.6 to 6.2 per 100000 population over the last 5 years and 59% of these cases were detected at an early stage which obviously leads to a better prognosis. The converse is true for ovarian cancer. 56.3% of ovarian cancers were detected at a late stage (Figure 3).

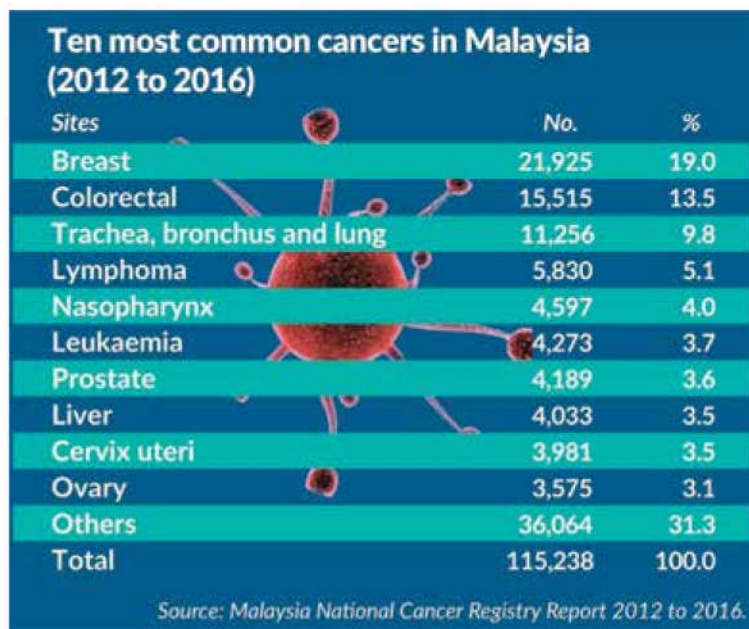


Figure 1

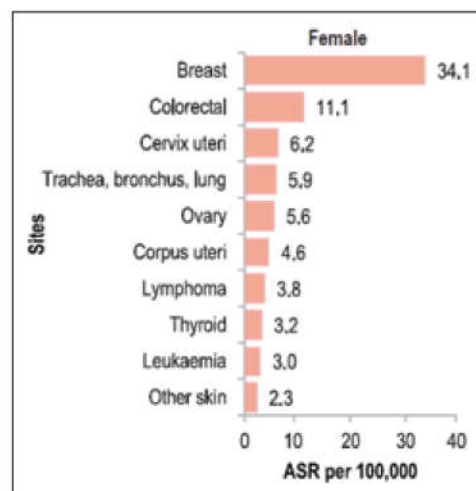


Figure 2: Age standardised incidence rates for 10 common cancers in females, Malaysia

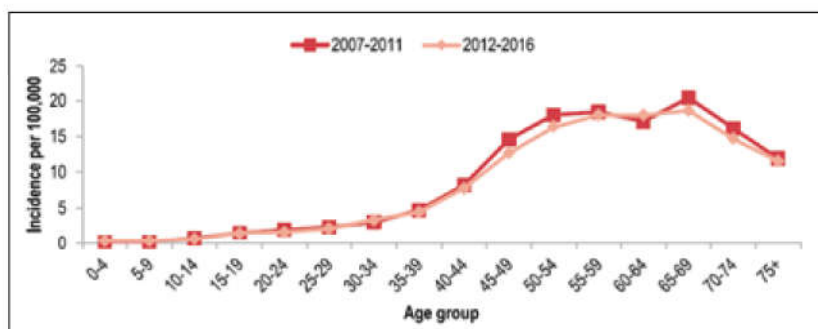


Figure 3: Ovarian cancer - Comparison of age-specific incidence rate by year, Malaysia

As primary care providers, can we make a difference?

Ovarian cancer still remains an elusive disease.

- It has the highest fatality to case ratio among all gynaecological malignancies
- It presents as a major and complex surgical challenge and often requires intense and sometimes novel therapies
- It drains the patients of their physical and psychological strength

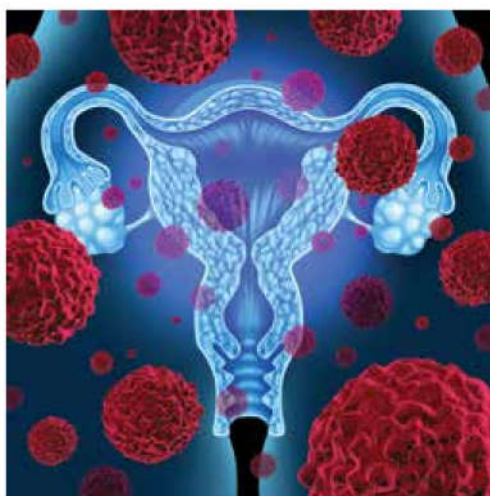
- In spite of achieving optimal surgical clearance, the disease recurs in about 70% of cases within 18 months

A number of environmental and genetic factors play a part in the aetiology of ovarian cancer. We now know the benefits of genetic testing and if we identify the subgroup of patients who have genetic mutations, they will benefit from certain treatment strategies and hence reduce the case fatality ratio. Genetic testing is available in the primary care setting. There are now

private labs offering this service at a fraction of what it used to cost five years ago.

Most (45%) epithelial ovarian cancers are sporadic. Familial or hereditary patterns account for only 5-10% of ovarian malignancies. Amongst these hereditary ovarian cancers, there are mutations seen mainly in BRCA1 and BRCA2 genes. The BRCA1 gene is located in chromosome 17 and the BRCA2 gene is located at chromosome 13. There are over 1600-1800 mutations in both BRCA1 and BRCA2 antigens and these mutations are passed via autosomal dominance. These mutations increase risk of DNA damage and hence tumour formation. With the number of mutations one realises that a full pedigree analysis of both maternal and paternal sides has to be carefully evaluated before further testing is imposed on the patient.

It is estimated that women with a BRCA1 mutation have a 40-60% risk of developing ovarian cancer while women with BRCA2 have a 10-30% lifetime risk of the disease. Testing is recommended for women with a greater than 10% risk of mutation and identification of these patients is via a scoring system in most countries.



Arguably, the knowledge of BRCA1 and 2 mutation status is of value to the patient and to the clinician for better understanding of the disease, prognosis and in selecting the most effective treatment (or non-treatment) options. However, the problem of genetic testing does not end here. The results have to be communicated in a careful

manner as the implications are many. This is best done by a genetic counsellor as it may result in testing of other unaffected family members who may or may not agree to further testing. Unfortunately we have limited access to genetic counsellors and some of them are only available in the University or larger government hospitals.

There is currently no consensus in Malaysia regarding testing for BRCA1/BRCA2 in ovarian cancer patients. In some countries the initial risk assessment is done prior to testing. This is to avoid unnecessary testing which may also lead to misinterpretation of the results and unnecessary anxiety. Risk stratification is done as follows:

- Ovarian cancer < 60 years of age
- High-grade serous ovarian cancers
- Non-mucinous ovarian cancers
- Bilateral breast cancer < 50 years of age
- Breast cancer diagnosis before 40 years of age
- Multiple cases of breast cancer in the family

- Family history of breast and ovarian cancer

As primary care providers, we can still offer periodic screening with tumour markers and ultrasonography for early detection of the disease. It is evident that a multi-faceted approach is necessary to battle this disease and the various stakeholders have to support and facilitate this if we want to see it through.

In our country, where genetic counsellors are few coupled with a shortage of oncologists and purpose-built cancer centres, ovarian cancer will still remain what it is... an elusive disease. **BMMA**



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He firmly hopes that improvement in screening protocols for ovarian cancer will help decrease the incidence of this disease over the next decade.

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