Breast Cancer

Nabhan Mahmood Kayani

1st Year MBBS, Islamabad Medical and Dental College, Islamabad, Pakistan

Key Points
➢ Breast cancer- a common cause of death in women ➢ Breast cancer is divided into Estrogen receptor (ER), progesterone receptor (PR), and HER 2 groups. classification of invasive breast cancer, which is used to provide treatment options and to predict clinical outcomes ➢ Classification of invasive breast cancer is used to provide treatment options and to predict clinical outcomes

Cancer is one of the leading causes of death worldwide. In 2008, an estimated 8 million people died from serious diseases, and this figure is estimated to reach 11 million by 2030.[1] Breast cancer is the most common cancer in women and another of the most important causes of death among them.4 Breast cancer is a multi-faceted disease and a variety of factors that contribute to its development. Although the disease occurs worldwide, its prevalence, mortality rate, and mortality vary widely in different parts of the world, which may be due to many factors such as genetics, lifestyle, genetics, and environment. Changes in risk factors have led to increased breast cancer. which is increasing daily. Although human screening may reduce the risk of breast cancer, side effects, overdose, and rising costs are the disadvantages of this approach. The segregation of women based on risk factors for breast cancer may be effective in developing risk-free methods and designing targeted breast cancer screening programs.

Breast Cancer types

Based on various factors such as etiology, clinical presentation, cell characteristics, and response to treatment, breast cancer was divided into different groups. Estrogen receptor (ER), progesterone receptor (PR), and HER2 were the most used. classification of invasive breast cancer, which is used to provide treatment options and to predict clinical outcomes. The incidence rate of different hormone receptor-positive breast cancer varies from place to place. Milne et al found that ER-negative breast cancer was associated with an increased risk of breast cancer in BRCA1 mutants. In a study among women 50 and older, related to non-Spanish whites, women of color (African Americans, Native Americans, Filipinos, Chinese, Koreans, Vietnamese, Indians / Pakistanis, Mexicans, South / Central Americans, and Puerto Ricans living -United States) 1.4- to 3.1-double the probability of estrogen receptor-negative / progesterone receptor-negative breast cancer. Yip et al in a Malaysian study showed that race and range were strongly associated with ER positivity levels. They reported that between 1994 and 2008, every 5 years, the proportion of ER+ breast cancer increased by 2%, well-differentiated plants, high-grade tumors, and thus poor survival after breast cancer. In a study conducted by Parise et al, Asian Pacific Islanders had an increased risk of developing ER- / PR- / HER2 + subtype. Another study by Yamashita et al showed that ER-positive tumors increased significantly among Japanese women.

Incidence

Breast cancer is the second most common cancer in the world and the most common cancer in women. The lifetime risk of breast cancer in all women in the United States is 12.4% or one in eight women.18 In 2012, 1.67 million new cases of breast cancer were diagnosed. Worldwide, they account for about 25% of all cancers. Although cancer is found worldwide, the

prevalence of breast cancer is high, and breast cancer rates vary widely by race and nationality. Incidence of breast cancer varies from country to country, varies from 27 per 100,000 in Central Africa and East Asia to 92 per 100,000 in North America. The incidence rate of breast cancer is estimated to reach 3.2 million by 2050. With population growth over the years in developed countries, the prevalence rate breast cancer in the elderly is growing. In 2017, approximately 252,710 new cases of breast cancer and 6,341 local breast cancer were diagnosed in the United States. About 24% of all breast cancer cases occur in the Asian region- Pacific, with the highest rates observed in China, Japan, and Indonesia. Outside Japan, the prevalence of breast cancer is increasing among Asian and American women, with Korea counting the highest rate of breast cancer in 1988-2006 and in the Southeast Asia from 1988-2013. It is estimated that 277,054 new cases of breast cancer were diagnosed in East Asia in 2012. 107,545 in Southeast Asia and 223,899 in south-central Asia. Thanks to better access to screening and treatment programs, breast cancer survival rates are rising, and the 5-year survival rate was 89% between 2005 and 2011.25 1 year the survival rate of breast cancer in European countries varies from 94.1% in Scotland to 97.1% in Italy. Due to delays in seeking breast cancer screening and treatment for African women, the survival rate is low among them. Incidence (ag average) e-standardized per 100,000) breast cancer in different regions of the world are as follows: highly developed regions: 74.1, underdeveloped regions: 31.3, Western Europe: 96.0, Northern America: 91.6, Northern Europe: 89.4, Australia / New Zealand: 85.8, South -Central Asia: 28.2, and East Asia: 27.0.166

Mortality

Breast cancer is the fifth leading cause of death in 2012 worldwide, with a record 324,000 deaths in 2012, and it is the leading cause of death in developing countries. Also, with 197,000 deaths of 15.4% of all deaths, breast cancer was the second leading cause of death in developed countries after lung cancer. the incidence of breast cancer is high in developed countries, with high mortality rates being observed in underdeveloped regions. In addition, 89% of breast cancer deaths in the United States in 2017 occur in women 50 years of age or older. Thanks to medical advances and diagnostic methods of breast cancer control in high-income countries, a significant decline in breast cancer mortality rates is observed in these countries.30 The average breast cancer mortality rate (ASMR) of breast cancer worldwide is 12.9 and Africa has the highest ASMR in the world. The mortality rate varies from six cases per 100,000 people in East Asia to 20 per 100,000 people in West Africa. The death-to-the-incidence rate in North America is 0.16, indicating a high survival rate, and in Asia it is between 0.23 and -0.48.31 Many Asian countries have a low to medium income, therefore, breast cancer is one of the main causes. deaths in these countries. The mortality rate (estimated age of 100,000) of breast cancer in different regions of the world is as follows: Highly developed regions: 14.9, underdeveloped regions: 11.5, Western Europe: 16.2, Northern America: 14.8, Northern Europe: 16.4, Australia / New Zealand: 14.5, South-Central Asia: 13.5, and Eastern Asia: 6.1.166

Reference

Momenimovahed Z, Salehiniya H. Epidemiological characteristics of and risk factors for breast cancer in the world. Breast Cancer: Targets and Therapy. 2019;11:151