# Libyan International Medical University
# Faculty of Basic Medical Science

## The incidence of Breast cancer in eastern Libya for the year 2017

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**Abstract :**
Cancer registration in Libya is still limited. So we present (Muhammad El Taib, Sanad El Denaly and Hammad El Ydri ) in this report the data were obtained from the patient records of those who were diagnosed in the Department of Oncology at the Benghazi Medical Center (BMC) from January 1, 2017 to December 31, 2017 compared on those diagnosed in the year 2012 and 2003. The aim of this report to explain what are the expected risk factors that responsible for the elevation that happened in eastern Libya along the last Fourteen years (2003-2017).

**Introduction:**
Breast Cancer is an important health concern in Libya, especially in the setting of an aging population and limited healthcare facilities. Breast cancer starts when cells in the breast begin to grow out of control. These cells usually form a tumor that can often be seen on an x-ray or felt as a lump. The tumor is malignant (cancer) if the cells can grow into (invade) surrounding tissues or spread (metastasize) to distant areas of the body. Breast cancer occurs almost entirely in women, but men can get breast cancer, too. [1]

**Discussion:**
The highest percentage of breast cancer accounted for Benghazi city (57 %), and this due to the high population that preasent in Benghazi. The number of cases of breast cancer in eastern of Libya were 307 cases from 624 cases female with 2 cases were males in 2017. [2] On the other hand, in 2012 the number of cases of breast cancer were 210 cases from 501 cases female with 4 cases were males suffering from breast cancer.[3] Finally in 2003 the number of cases of breast cancer were 116 cases from 453 cases female with 2 cases were males. [4] The diagrams below showing the incidence of breast cancer according to specific age group. (fig1,2 and 3)

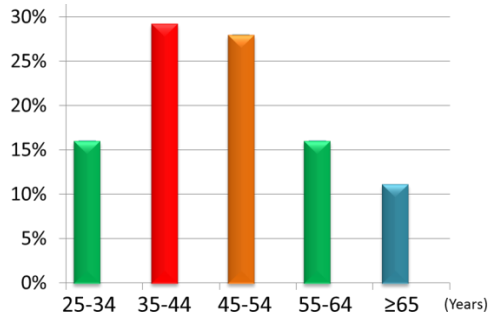


**Figure 1**: Percentage of Cases by Age (Years) for the year 2003

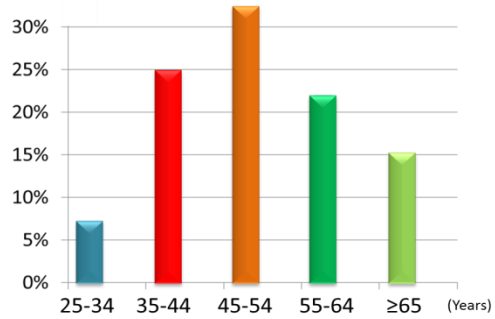


**Figure 2**: Percentage of Cases by Age (Years) for the year 2012

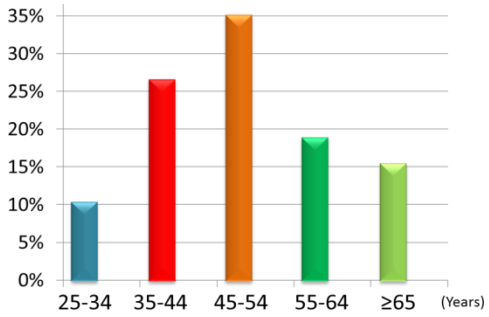


**Figure 3**: Percentage of Cases by Age (Years) for the year 2017

In the year 2003 the predominant age group was between 35 and 44 years (29% of all cases) exceeded the age group 45-54 by one case so the two groups nearly equal. while in 2012 and 2017 the predominant age group was between 45 and 54 years, and this group we can call it the Menopausal group. [5] We found that the mean age of all cases of the year 2017 was decreased (49.6) compared with the year 2012 (51.3). Over the years, in eastern of Libya more than half of cases were diagnosed at advanced stages (III, IV ), [4] while in United Kingdom, most of cases were diagnosed at an early stages (I, II), and this difference between the two countries reflects the grade of education. [6] Every woman wants to know what she can do to lower her risk of breast cancer. Some of the factors associated with breast cancer -- being a woman, her age, and her genetics, for example -- can't be changed. Other factors -- being overweight, lack of exercise, smoking cigarettes, and eating unhealthy food -- can be changed by making choices. By choosing the healthiest lifestyle options possible, She can empower herself and make sure her breast cancer risk is as low as possible. The most common risk factors for breast cancer are listed as following:- Sex: Just being a woman is the biggest risk factor for developing breast cancer. There are about 190,000 new cases of invasive breast cancer and 60,000 cases of non-invasive breast cancer this year in American women. Age: As with many other diseases, her risk of breast cancer goes up as she get older. About two out of three invasive breast cancers are found in women 55 or older. Family History: Women with close relatives who've been diagnosed with breast cancer have a higher risk of developing the disease. If she / he has had one first-degree female relative (sister, mother, daughter) diagnosed with breast cancer, her / his risk is doubled. Personal History of Breast Cancer: If she's been diagnosed with breast cancer, she's 3 to 4 times more likely to develop a new cancer in the other breast or a different part of the same breast. This risk is different from the risk of the original cancer coming back (called risk of recurrence). Being Overweight: Overweight and obese women have a higher risk of being diagnosed with breast cancer compared to women who maintain a healthy weight, especially after menopause. Being overweight also can increase the risk of the breast cancer coming back (recurrence) in women who have had the disease. Pregnancy History: Women who haven’t had a full-term pregnancy or have their first child after age 30 have a higher risk of breast cancer compared to women who gave birth before age 30. Breastfeeding History: Breastfeeding can lower breast cancer risk, especially if a woman breastfeeds for longer than 1 year. Menstrual History: Women who started menstruating (having periods) younger than age 12 have a higher risk of breast cancer later in life. The same is true for women who go through menopause when they're older than 55. Using HRT (Hormone Replacement Therapy): Current or recent past users of HRT have a higher risk of being diagnosed with breast cancer. Since 2002 when research linked HRT and risk, the number of women taking HRT has dropped dramatically. Dense Breasts: Research has shown that dense breasts can be 6 times more likely to develop cancer and can make it harder for mammograms to detect breast cancer. Lack of Exercise: Research shows a link between exercising regularly at a moderate or intense level for 4 to 7 hours per week and a lower risk of breast cancer. Lack of Exercise: Research shows a link between exercising regularly at a moderate or intense level for 4 to 7 hours per week and a lower risk of breast cancer. Low of Vitamin D Levels: Research suggests that women with low levels of vitamin D have a higher risk of breast cancer. Vitamin D may play a role in controlling

normal breast cell growth and may be able to stop breast cancer cells from growing. Eating Unhealthy Food: Diet is thought to be at least partly responsible for about 30% to 40% of all cancers. No food or diet can prevent you from getting breast cancer. But some foods can make your body the healthiest it can be, boost your immune system, and help keep your risk for breast cancer as low as possible. Exposure to Chemicals in Food: There's a real concern that pesticides, antibiotics, and hormones used on crops and livestock may cause health problems in people, including an increase in breast cancer risk. There are also concerns about mercury in seafood and industrial chemicals in food and food packaging. Exposure to Chemicals in Plastic: Research strongly suggests that at certain exposure levels, some of the chemicals in plastic products, such as bisphenol A (BPA), may cause cancer in people. Smoking: Smoking causes a number of diseases and is linked to a higher risk of breast cancer in younger, premenopausal women. Research also has shown that there may be link between very heavy second-hand smoke exposure and breast cancer risk in postmenopausal women. [9] Birth control pills: contraceptives that use hormones, including birth control pills and intrauterine devices (IUDs), slightly increase the risk of breast cancer. But the importance of the increase is unique to each woman and depends on many factors, including: her age her general health and her personal risk of breast cancer such as smoking cigarettes, and maintaining a healthy weight. According to the oncologist dr. Rehab Shembesh from the oncology center in eastern Libya, said that most cases that diagnosed with breast cancer were use birth control pills. [8]

**Conclusion:**

The number of cases of breast cancer in eastern of Libya was increased by 46% between 2012-2017. Also the number of cases of breast cancer in eastern of Libya for the year 2017 compared with 2003 was increased by 164.6 %. In our humble opinion, this high elevation that happened between the years 2003, 2012 and 2017 is due to the Libyan Civil War (17 February Revolution in 2011) and the War against terrorism (2014) Which made Libya's economy weak (stress, malnutrition and decreased birth rate leads to decreased number of ladies that breastfeed) especially in the east, as well as forced the ladies to stay indoors (Lack of activity or exercise). Also birth control pills may play a role in this elevation, because most of Libyan families now want to get a limited number of children (1 or 2) in their life due to poor living. We believe that the prevalence of vitamin D deficiency between the Libyan women due to their way of wearing the cloths and lack of getting out of their home (Lack of exposure to the sunlights), and second-hand smoke exposure, have a relation with breast cancer. We conclude that the rate of increasing incidences for the years between 2012 and 2017 is 9% per each year, if the state of Libya remains as it is until the next five years, from this result, we expect that the number of cases for the year 2022 will be between 400-500 case, and about 350 case for the year 2018. The way that with it reduce the number of new cases is by improve our education and raise awareness(Social Media, satellite channels..etc.) between the people.

**References:**

1. Cancer.org. (2018). What Is Breast Cancer?. [online] Available at: https://www.cancer.org/cancer/breast-cancer/about/what-is-breast-cancer.html [Accessed 1 May 2018].

2. El Taib M, El Denaly S, El Ydri H, (2018),Breast cancer incidence in eastern Libya: The first results from the Benghazi Cancer Registry, 2017.

3. Bodalal Z, Azzuz R, Bendardaf R. Cancers in Eastern Libya: First results from Benghazi Medical Center. World Journal of Gastroenterology : WJG. 2014;20(20):6293-6301. doi:10.3748/wjg.v20.i20.6293.
4. El Mistiri, M. , Verdecchia, A. , Rashid, I. , El Sahli, N. , El Mangush, M. and Federico, M. (2007), Cancer incidence in eastern Libya: The first report from the Benghazi Cancer Registry, 2003. Int. J. Cancer, 120: 392-397. doi:10.1002/ijc.22273
5. Taylor & Francis Online. (2009). Menopausal age, related factors and climacteric symptoms in Libyan women. [online] Available at: https://www.tandfonline.com/doi/abs/10.3109/13697137.2012.682107?journalCode=icmt20 [Accessed 2 May 2018].
6. Cancer Research UK. (2018). Breast cancer incidence (invasive) statistics. [online] Available at: http://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/breast-cancer/incidence-invasive#collapseThree [Accessed 1 May 2018].
7. Breastcancer.org. (2018). Breast Cancer Risk Factors. [online] Available at: http://www.breastcancer.org/risk/factors [Accessed 2 May 2018].
8. Breastcancer.org. (2018). Does Hormonal Birth Control Increase Breast Cancer Risk?. [online] Available at: http://www.breastcancer.org/research-news/do-hormonal-contraceptives-increase-risk [Accessed 3 May 2018].