

Description of Endometrial Cancer Epidemiology at Sabratha National Cancer Institute, Western Libya: A 3-Year Data Analysis

Mohamed A. Alsla ¹, Azab Elsayed Azab ^{2*}, Nora Farhat Ahmed ³, Abrar Messaoud Boubekhira ⁴, Shahed Abdualjwad Aiad ⁵

^{1,3-5} Department of Community and Family Medicine, Faculty of Medicine, Sabratha University.

² Department of Physiology, Faculty of Medicine, Sabratha University.

*Corresponding Author: Azab Elsayed Azab, Department of Physiology, Faculty of Medicine, Sabratha University.

Received date: **January 11, 2024**; Accepted date: **January 15, 2024**; Published date: **January 22, 2024**

Citation: Mohamed A. Alsla, Azab Elsayed Azab, Nora Farhat Ahmed, Abrar Messaoud Boubekhira, Shahed Abdualjwad Aiad, (2024). Description Of Endometrial Cancer Epidemiology at Sabratha National Cancer Institute, Western Libya: A 3-Year Data Analysis, *J Clinical Research and Reports*, 15(1); DOI:10.31579/2690-1919/352

Copyright: © 2024, Azab Elsayed Azab. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

Background: Endometrial cancer is the sixth most common cancer in women worldwide and the most frequent gynecological cancer in developed countries. Endometrial cancer mortality rates are high in low- and middle-income countries.

Objectives: The current study aims to provide valuable insights into the epidemiology of endometrial cancer at Sabartha cancer institute over three-years periods, with the goal of identifying trends, risk factors, and potential areas for intervention.

Methodology: This study is descriptive study, using data which were collected from the all primary endometrial cancers that were diagnosed or treated in the Sabratha National Cancer Institute, Western Libya. The data were collected by hospital cancer registry from 2020 to 2022. The demographic and clinical features of the patients were abstracted included registration number, age, parity, place of residence, family history, and past medical history. Descriptive statistics in form of percentage with 95% CI was used to explain distribution of cancer cases by study variables. The data was compared using Chi-Square using SPSS Statistics for Windows, Version 26.

Results: The results showed that over three years period, 82 confirmed cases of endometrial cancer were registered at Sabratha National Cancer Institute. The average age of cases was 57 years. Analysis of the cases by the age group showed that about 21% of cases were from 46-55years group while over 64% were aged above 50 years. Almost of cases (25%) came from Tripoli while only 6% came from Sabratha which is the place of cancer institute. Analysis of study results by parity showed that both nulliparous women and parous women (> 6 child) represent almost more than 50% of endometrial cancer cases during study period. Also, analysis of study results by family history of endometrial cancer showed that only 14% of cases had family history of the cancer.

Conclusion: It can be concluded that the findings of this 3-year data analysis on endometrial cancer epidemiology provide valuable insights into the trends and patterns of this disease. The study highlights the importance of continued surveillance and research to better understand the risk factors, incidence rates, and outcomes associated with endometrial cancer. This information can help inform public health strategies, early detection efforts, and treatment approaches to improve patient outcomes and reduce the burden of this disease. Further research is needed to explore potential interventions and preventive measures that can address the growing impact of endometrial cancer on global health.

Keywords: endometrial cancer; epidemiology; demographic and clinical features; sabratha national cancer

1.Introduction

Endometrial cancer is a significant health concern affecting women worldwide. Endometrial cancer is the most frequent gynecological cancer in developed countries, in 2020 there were more than 417000 new cases and the age-standardized rate of this cancer was 8.7 per 100000 women [1]. The typical age-incidence curve for endometrial cancer shows that

most cases are diagnosed after the menopause, with the highest incidence around the seventh decade of life. The appearance of symptoms early in the course explains why most women with endometrial cancer have early-stage disease at presentation [1-2].

Endometrial cancer mortality rates vary globally, with some countries experiencing higher rates than others. According to the World Health Organization (WHO), endometrial cancer is the sixth most common cancer in women worldwide and is responsible for a significant number of deaths. In general, developed countries tend to have lower mortality rates due to better access to healthcare, early detection, and effective treatment options. However, there are still variations within these countries based on factors such as socioeconomic status and healthcare disparities.

According to the Global Cancer Observatory (GLOBOCAN) 2020 data, the highest endometrial cancer mortality rates are found in low- and middle-income countries. For example, in Sub-Saharan Africa, the age-standardized mortality rate (ASMR) is estimated to be around 7.8 per 100,000 women. In comparison, high-income countries like Australia and Canada have ASMRs of around 2-3 per 100,000 women [2].

It's important to note that these statistics are estimates and can vary depending on various factors such as data availability and quality. Additionally, advancements in medical technology and increased awareness about endometrial cancer can lead to changes in mortality rates over time. In order to understand the epidemiology of endometrial cancer, it is important to analyze data over a period of time.

2. Objectives:

The current study aims to provide valuable insights into the epidemiology of endometrial cancer at Sabartha cancer institute over three-years periods

(2020-2022), with the goal of identifying trends, risk factors, and potential areas for intervention.

3. Methodology:

3.1. The study population and data sources:

This study is descriptive study, using data which is collected from the all primary endometrial cancers that were diagnosed or treated in the Sabartha National Cancer Institute, Western Libya. The data were collected by hospital cancer registry from 2020 to 2022. Cases were coded in the registry based on the third edition of the international classification of diseases for oncology (ICD-IO3)

3.2. Data management and analysis:

The demographic and clinical features of the patients were abstracted included registration number, age, parity, place of residence, family history, and past medical history. Descriptive statistics in form of percentage with 95% CI was used to explain distribution of cancer cases by study variables. The data was compared using Chi-Square using SPSS Statistics for Windows, Version 26.

4. Results

Study results are shown in table .1. Over three years period 82 confirmed cases of endometrial cancer were registered at Sabartha Cancer institute. The average age of cases was 57 years.

Variable	N	%	95 CI
Age Group			
25-35	4	5%	2%-13%
36-45	8	10%	6%-21%
46-55	17	21%	13%-31%
56-65	31	38%	27%-49%
>65	22	26%	18%-38%
Place of residence			
Others	8	10%	6%-21%
West Mountain	16	20%	12%-30%
Azawia	16	20%	12%-30%
West Coast	4	5%	2%-13%
Alajelat	4	5%	2%-13%
Sabartha	6	7%	3%-15%
Sorman	6	7%	3%-15%
Tripoli	22	26%	18%-38%
Parity (number of children)			
parous < 6 child	18	22%	14%-32%
parous > 6 child	26	32%	22%-43%
Non available	12	14%	8%-24%
Nulli parous	26	32%	22%-43%
Family History of cancer			
Non available	15	18%	11%-28%
Liver Cancer	1	1%	0.3%-6%
Breast Cancer	1	1%	0.3%-6%
Without family History	54	66%	55%-76%
With family history	11	14%	6%-22%

Table 1: The distribution of endometrial cancer cases according to age group, Place of residence, Parity, and Family History of cancer.

Analysis of the cases by the age group showed that in the three years (2020-2022) about 21% of cases were from 46-55years group while over 64% were aged above 50 years. (Figure. 1)

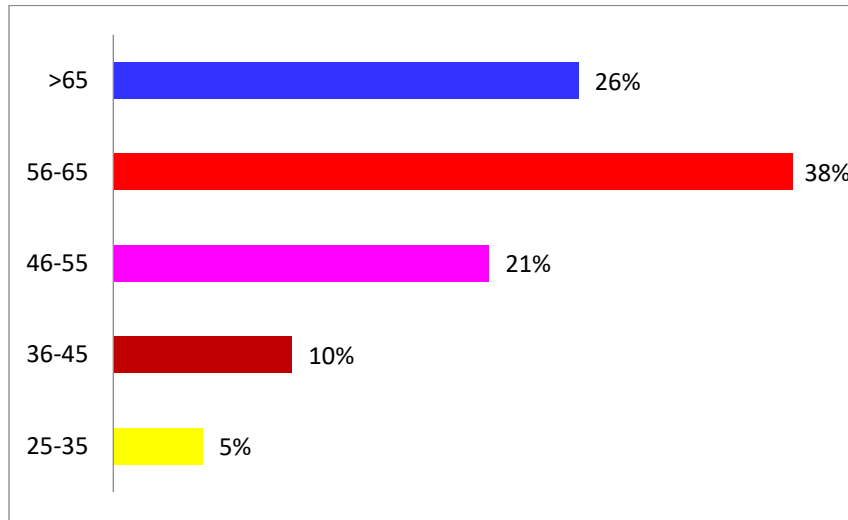


Figure. 1: The distribution of the endometrial cancer cases according to age groups

Figure (2) showed distribution of cases by place of residence. almost 25% of cases came from Tripoli while only 6% came from Sabratha which is the place of cancer institute.

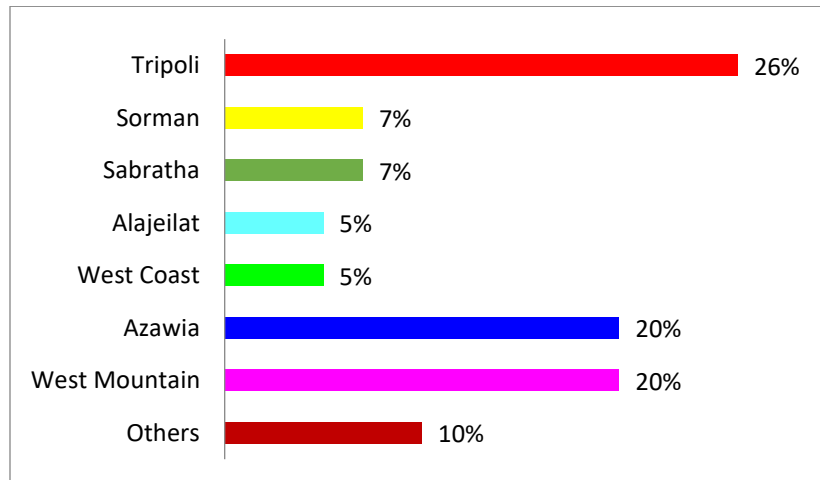


Figure. 2: Structure of endometrial cases by the place of resident

Analysis of study results by parity showed that both nulliparous women and parous women (> 6 child) represent almost more than 50% of endometrial cancer cases during study period (2020-2022) (Figure.3).

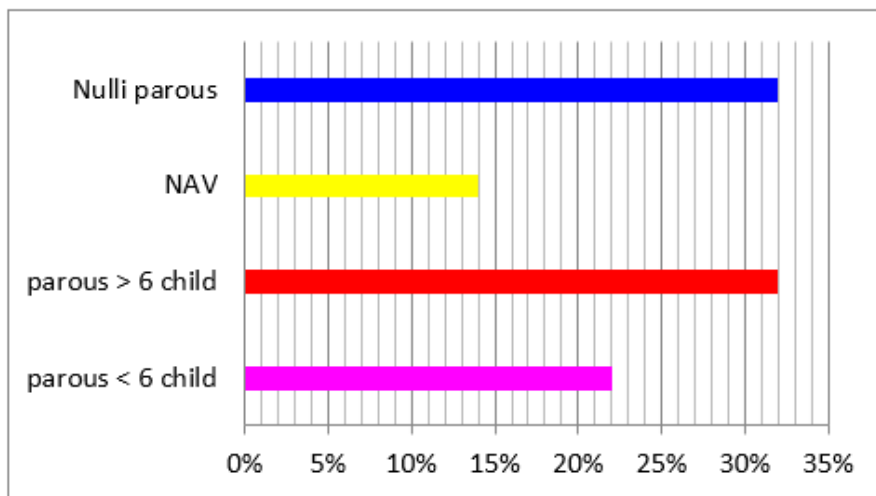


Figure 3: The distribution of the endometrial cancer cases according to parity.

Analysis of study result by family history of endometrial cancer showed that only 14% of cases had family history of the cancer (Figure.4).

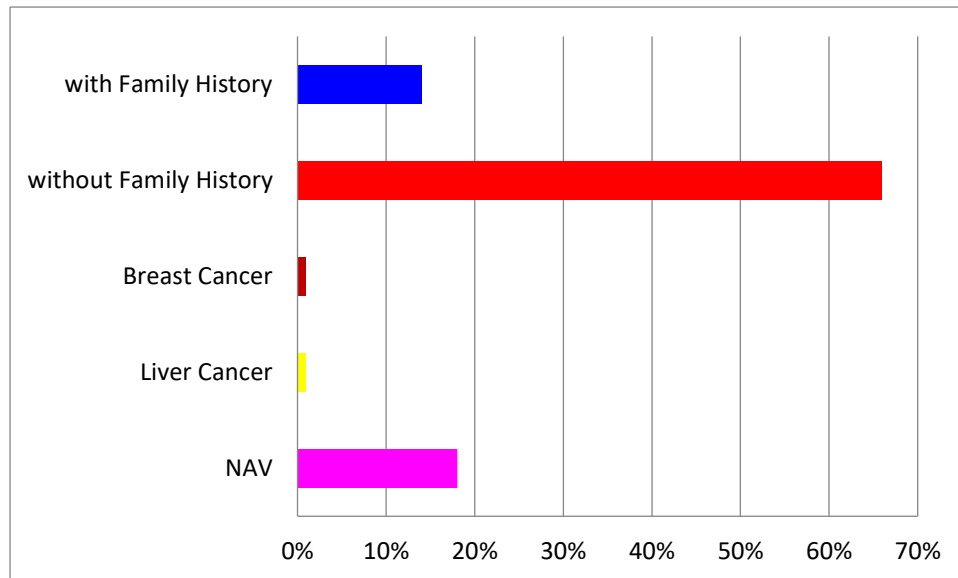


Figure.4: The distribution of the endometrial cancer cases according to family history of the cancer.

5. Discussion

The endometrial cancer epidemiology data analysis at the Sabratha cancer institute over the past three years has provided valuable insights into the trends of this type of cancer. The analysis has helped in understanding the demographic distribution of endometrial cancer, as well as identifying potential risk factors and areas for targeted interventions.

Early menarche and late menopause are well-known risk factors for developing uterine cancers. In general, endometrial cancer is more common in older women, with the majority of cases diagnosed in women over 50 years old. However, there is also a small but significant number of cases diagnosed in younger women, particularly those in their 30s and 40s.

One of the key findings from the data analysis in present study is the increasing incidence of endometrial cancer, particularly among women aged between 45-55 years (21% of the cases). Additionally, the analysis has revealed more 64% of cases were diagnosed after menopause (around 50 years). Study findings are consistent with studies carried out in Egypt by Alshahrani s, et al where the peak age was 60-69. another study by Missaoui N et al in Tunisia found that the median age was 60 [3-4]

When analyzing endometrial cancer by age group, several key trends emerge. In older women, endometrial cancer is often associated with hormonal changes related to menopause, obesity, and other risk factors such as diabetes and hypertension [3-4-5]. In contrast, endometrial cancer in younger women is often associated with genetic predisposition, such as Lynch syndrome or other hereditary conditions that increase the risk of developing certain types of cancers. Additionally, younger women with endometrial cancer may have different tumor characteristics compared to older women, including a higher prevalence of aggressive subtypes such as serous or clear cell carcinoma. , younger women with endometrial cancer may face unique challenges related to fertility preservation and long-term quality of life issues. As a result, tailored treatment approaches that consider these specific needs are essential for this age group [5]

Overall, analyzing endometrial cancer by age group highlights the importance of understanding the distinct risk factors, tumor characteristics, and treatment considerations for different age groups. This knowledge can inform targeted prevention efforts and personalized treatment strategies to improve outcomes for all women affected by this disease.

Disparities in endometrial cancer rates among different residential group could be pointed to potential disparities in access to healthcare and screening services. While 20% of cases were coming from areas like Tripoli and west mountain only 7% were coming from areas surrounding the cancer institute like Sabartha and Aljeliat. Studies have shown that women living in urban areas have a higher risk of developing endometrial cancer compared to those living in rural areas. This may be due to factors such as lifestyle, diet, and access to healthcare.

Urban areas tend to have higher rates of obesity, which is a known risk factor for endometrial cancer. Additionally, urban dwellers may have less physical activity and a higher consumption of processed foods, both of which are associated with an increased risk of the disease. On the other hand, women in rural areas may have more physically demanding lifestyles and consume a diet that is lower in fat and processed foods, which could contribute to a lower risk of endometrial cancer. Access to healthcare also plays a role in the incidence of endometrial cancer by place of residence. Women in rural areas may have limited access to screening and early detection services, leading to a higher proportion of advanced stage diagnoses. On the other hand, women in urban areas may have better access to healthcare facilities and resources for early detection and treatment (5-8).

Parity, or the number of times a woman has given birth, has been found to have an impact on the risk of developing endometrial cancer. Research has shown that nulliparous women (those who have never given birth) have a higher risk by more than 40% of developing endometrial cancer compared to women who have had children [5-8]. This is believed to be due to the protective effect of pregnancy and childbirth on the endometrium. During pregnancy, levels of estrogen and progesterone increase, which can help regulate cell growth in the endometrium and reduce the risk of abnormal cell growth that can lead to cancer. Increased incidence of endometrial cancers in women who have had multiple pregnancies and births (multiparous women) found in this study could be attributed to fact that each pregnancy can lead to hormonal changes that may increase the risk of developing this type of cancer [5-8].

In meta analysis by Win et al, the researchers found that relative risk of endometrial cancer associated with a first-degree family history of endometrial cancer was 1.82 (1.65–1.98) and for colorectal cancers was 1.17 (1.03–1.31). on the other hand, breast, ovarian, and cervical cancers were not associated with increased risk of endometrial cancer [9].

6. Conclusion

In conclusion, the findings of this 3-year data analysis on endometrial cancer epidemiology provide valuable insights into the trends and patterns of this disease. The study highlights the importance of continued surveillance and research to better understand the risk factors, incidence rates, and outcomes associated with endometrial cancer. This information can help inform public health strategies, early detection efforts, and treatment approaches to improve patient outcomes and reduce the burden of this disease. Further research is needed to explore potential interventions and preventive measures that can address the growing impact of endometrial cancer on global health

References:

1. Bahaaldin, A. S., Ali, W. M., & Tawfiq, H. F. (2022) Trend of uterine cancer at Hiwa Cancer Hospital of the Sulaymaniyah Province of Iraqi Kurdistan over a five-year period. *International Journal of Health Sciences*, 6(S5), 9305–9319.
2. Alshahrani S, Soliman AS, Hablas A, Ramadan M, Meza JL, Rimmenga S, Seifeldein IA, & Chamberlain RM. (2018) Changes in Uterine Cancer Incidence Rates in Egypt. *Obstet Gynecol Int*. 3632067.
3. Missaoui N, Jaidene L, Abdelkader AB, Abdelkrim SB, Bezig N, Yaacoub LB, Yaacoubi MT, Hmissa S. (2011) Cancer of corpus uteri in Tunisia: epidemiological and clinicopathological features. *Asian Pac J Cancer Prev*. 12(2): 461-464. PMID: 21545213.
4. Raglan O, Kalliala I, Markozannes G, Cividini S, Gunter MJ, Nautiyal J, Gabra H, Paraskevaidis E, Martin-Hirsch P, Tsilidis KK, & Kyrgiou M. (2019) Risk factors for endometrial cancer: An umbrella review of the literature. *Int J Cancer*. 145(7): 1719-1730.
5. Wu QJ, Li YY, Tu C, Zhu J, Qian KQ, Feng TB, Li C, Wu L, & Ma XX. (2015) Parity and endometrial cancer risk: a meta-analysis of epidemiological studies. *Sci Rep.*, 5: 14243.
6. Ali AT. (2013) Risk factors for endometrial cancer. *Ceska Gynecologie*. 78(5): 448-459.
7. Purdie DM, & Green AC. (2001) Epidemiology of endometrial cancer. *Best Practice & research. Clinical Obstetrics & Gynaecology*. 15(3): 341-354.
8. Win, A. K., Reece, J. C., & Ryan, S. (2001) Family history and risk of endometrial cancer: a systematic review and meta-analysis. *Obstet Gynecol.*, x 125(1), 89-98.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here: [Submit Manuscript](#)

DOI:10.31579/2690-1919/352

Ready to submit your research? Choose Auctores and benefit from:

- fast, convenient online submission
- rigorous peer review by experienced research in your field
- rapid publication on acceptance
- authors retain copyrights
- unique DOI for all articles
- immediate, unrestricted online access

At Auctores, research is always in progress.

Learn more <https://www.auctoresonline.org/journals/journal-of-clinical-research-and-reports>