



Manual *on* **PREVENTIVE ONCOLOGY**

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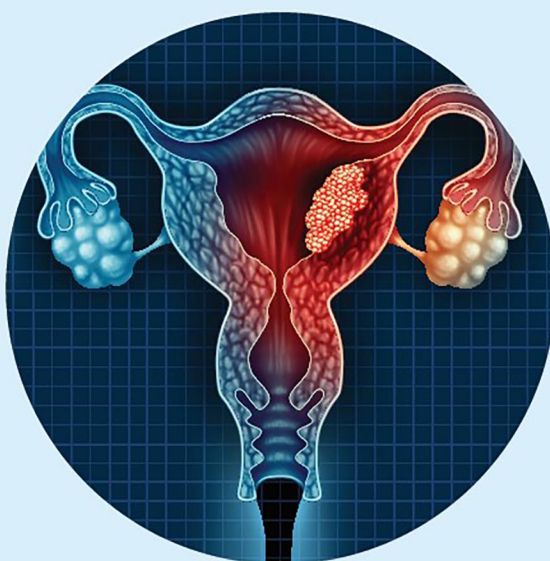
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Girish Mane

Co-Editors

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SECTION

Introduction to Gynecological Malignancies

1. Gynecological Malignancies Overview

Helen Kamei, Priya Ganesh Kumar, Mayanglambam Ronita Devi

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Gynecological Malignancies Overview

Helen Kamei, Priya Ganesh Kumar, Mayanglambam Ronita Devi

The burden of cancers globally is increasing and globally, gynecological cancers are the most common cancer among women. GLOBOCAN 2020 noted that amongst gynecological cancers—breast, cervical, ovarian, and uterine cancers ranked amongst the top 10 common cancers in women globally.¹ Breast cancer has been found to be one of the most common cancers among women worldwide; on the other hand, in some developing countries, cervical cancer remained a leading cause of cancer-related deaths.^{2,3} From 1990 to 2021, data [the Global Burden of Disease (GBD) Study, 2021] covering 204 countries and territories were analyzed on the incidence and disability-adjusted life years (DALYs) of four major female cancers (breast, cervical, uterine, and ovarian cancer) among 15–49 years women.⁴ An estimate of 1,013,475 new female cancers cases were reported globally in 2021. Between 1990 to 2021, the increase in age-standardized incidence rate (ASIR) (estimated annual percentage changes, EAPC 0.16%) with a decrease in age-standardized DALYs rate (–0.73%) were found to be significant. Except for cervical cancer, an annually increasing trends of age-standardized incidence rate were observed for the remaining cancers. Breast and cervical cancers were prevalent worldwide, compared to ovarian and uterine cancers. The age-standardized incidence rates of breast, ovarian, and uterine cancers showed an increasing trend along with increasing sociodemographic index (SDI). On the other hand, cervical cancer had downward trends for both ASIR and DALY rates along with SDI. The increase of age-specific rates of female cancers with age in 2021 was significantly notable in younger age groups, except for uterine cancer.⁴ Variations in incidence and mortality have been noted geographically too. A population-based study was carried out for the epidemiological trends of women’s cancers based on data from GBD spanning 1990 to 2019;⁵ for breast cancers, the USA, China, and Germany were the top three countries with the most incidence cases in 1990; by 2019, China (368.37×10^3), the USA (251.53×10^3), and India (144.09×10^3) were the countries with the most incidence cases, China (93.50×10^3), India (82.10×10^3), and the USA (54.40×10^3) were the countries with the most

deaths. Worldwide cervical cancer has been in decreasing trends since past three decades. However, high SDI countries had the lowest incidence and mortality rate while low SDI countries had highest incidence and mortality rate in 2019. The highest cancer burden was in middle SDI countries. China, India, and Brazil were leading countries for cervical cancer incidence and mortality. The highest burden of ovarian cancer and mortality fell on high SDI countries; low SDI despite lower burden and mortality, it had the most rapid increase in ASIR and mortality. The uterine cancer incidence increased in 2019, but the mortality rate has decreased during the past three decades. The incidence and mortality were highest in high SDI countries with the USA, China, and Russia as the leading countries in terms of incidence, with India ranking sixth in 2019.⁵ Cancer of vulva and vagina are less common among the gynecological malignancies, but cause as much morbidity and mortality.

Much advancements have been seen in terms of diagnosis, disease understanding and treatment, be it surgery, radiation, or chemotherapy; thus, bringing about better cure rates, improvement in quality of life, progression free survival and overall survival. Understanding of the natural history of cervical cancer starting with the Human Papilloma Virus, has made the possibility of achieving “cervical cancer eradication” a reality to be seen soon. Another reality about gynecological cancer is that in low-middle income countries, cancer of the breast, cervix, ovary, uterus, vagina, and vulva still account for nearly one-fourths deaths of overall cancer.⁶ The key to reducing any cancer incidence, mortality, and morbidity would be preventive measures, modifiable lifestyle risk factors and early detection with effective treatment strategies. Unlike cervical cancer, even though much needs to be done before achieving the goal of eradication, other gynecological malignancies do not have effective screening and primary preventive strategies. GLOBOCAN 2022 reported 1,437,427 new gynecological cancer cases with almost half of the figure related to mortality—680,372 deaths. An analysis of global burden of gynecological cancers in 2022 with projections to 2050 reverberate about the global disparities in incidence and mortality and concluded that the number of gynecological cancer cases in the next two decades will rise if the current trends continue and highlighted about the needs for interventions that can effectively prevent it.⁷ The objective of the following chapters is to bring about better understanding of the basics of gynecological malignancies in terms of organ-specific cancer for practicing gynecologists, to affect an intervention that would help bring down the overall incidence and mortality related to gynecological malignancies.

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Nandita Palshetkar is the Professor Emeritus, Department of Obstetrics and Gynecology, DY Patil School of Medicine, Navi Mumbai, Maharashtra, India. She is a Past President of FOGSI (2019) and Director of Bloom IVF Group, Mumbai, Maharashtra, India.



Hrishikesh D Pai is the Trustee FIGO of Asia Oceania (2023–25), Immediate Past President of FOGSI (2022–23), and Founder & Medical Director of Bloom IVF Group, Mumbai, Maharashtra, India.



Niranjan Chavan is a Professor and Unit Chief in the Department of Obstetrics & Gynecology of LTMM College and Sion Hospital, Mumbai, India. He is Treasurer FOGSI (2025–27), Past President MOGS (2022–23), Organising Secretary AICOG 2025 Mumbai, Vice President AFG (2025–26) and Secretary General MAGE. He is the Editor-in-Chief of JGOG, TOA, FEMAS journals and has edited 12 textbooks, 92 Publications, 224 citations and has 30 awards to his credit.



Priya Ganesh Kumar Medical Director of Sainiwas Healthcare, a chain of Preventive Oncology centres Pan India with main Branches at Mumbai and Delhi. Chairperson Gynaecologic Oncology Committee FOGSI 2021–24. WHO/IARC/FOGSI Colposcopy Course Trainer, trained more than 2500 Gynecologists in Colposcopy. Master Trainer for Cervical Cancer Prevention under NCD for State Govt. MP. Author of Colposcopy in Practical Gynecology three editions with CBS publications, MUHS Ref textbook and Author of Atlas in Colposcopy and Cytology, CBS publications. Convenor of FOGSI GCPR on Cervical Cancer Prevention and Management 2023.



Charulata Bapaye is the Chief Mentor and Director of GEMS Hospital and Endoscopy Centre, Pune, Maharashtra, India. Honorary Consultant at Deenanath Mangeshkar Hospital, Oyster & Pearl Hospital and Jahangir Hospital Pune. Past Visiting Professor at the Department of Physiotherapy, Fergusson College, Pune till 2015. Past Organizing Secretary three International conferences on "Pearls & Pitfalls in Gynec. Endoscopy and ART".



Girish Mane is the Director and Senior Consultant, Mane Hospital, Yavatmal, Maharashtra, India. State Coordinator of Association of Maharashtra Obstetrics and Gynaecological Societies.

Printed in India



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Daryaganj, New Delhi - 110 002, INDIA
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ISBN 978-93-6616-174-7

