

Expert Report



The epidemiologic status of gynecologic cancer in Thailand

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Conflict of Interest

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ABSTRACT

Between the years of 2010-2012, it was estimated there were a total of 112,392 new cases of cancers in Thailand, thus, the total age-standardized rate (ASR) per 100,000 is 137.6. In regards to the most prevalent types of cancer in female, breast cancer has the highest ASR, followed by cervical cancer (ASR=14.4); liver and bile duct cancer; colon and rectum cancer; trachea, bronchus and lung cancer; ovarian cancer (ASR=6.0); thyroid cancer; non-Hodgkin lymphoma and uterine cancer (ASR=4.3). The trend of cervical cancer in Thailand is decreasing, one key factor in making this possible was the employment of dual tract strategy (Pap smear and visual inspection with acetic acid [VIA]) by the government in 2005. In the future, the government is also considering integrating human papillomavirus (HPV) vaccination into the national immunization program, which may assist in the prevention of cervical cancer. By studying the statistical data of gynecologic cancer, it will be possible to formulate measures for the prevention, control and treatment of gynecologic cancer. Eventually, it will potentially improve the quality of life (QoL) of patients as well as decrease the mortality rate caused by gynecologic cancer.

Keywords: Gynecologic Neoplasms; Thailand

INTRODUCTION

The initiation of a population-based cancer registry in Thailand started in 1986 with Chiang Mai province being the first province to implement this registry. Second was Khon Kaen province which was initiated in 1988, Songkhla province and Bangkok in 1990 and Lampang province in 1993 [1]. This registry offers a rich source of raw statistical data on cancer in Thailand which can be analyzed by researchers with the latest data being available for 2010–2012. According estimates by the ministry of public health and ministry of education, the number of new cancer cases between the years of 2010 to 2012 were 54,586 cases for males and 57,806 cases for females. This corresponds to age-standardized rates (ASR) of 143.3 per 100,000 males and 131.9 per 100,000 females respectively. **Fig. 1** displays the Ministry of Public Health and Ministry of Education estimates for the top ten leading types of cancers for each gender, which is displayed as ASR. Regarding the leading type of cancers within the Thai male sample, the highest rate of occurrence falls into liver and bile duct cancer, with trachea, bronchus and lung cancer coming in second place; colon and rectum cancer; and prostate cancer coming in third and fourth place respectively. However, the focus of this paper is in regards to the incidence of cancer in Thai female. The

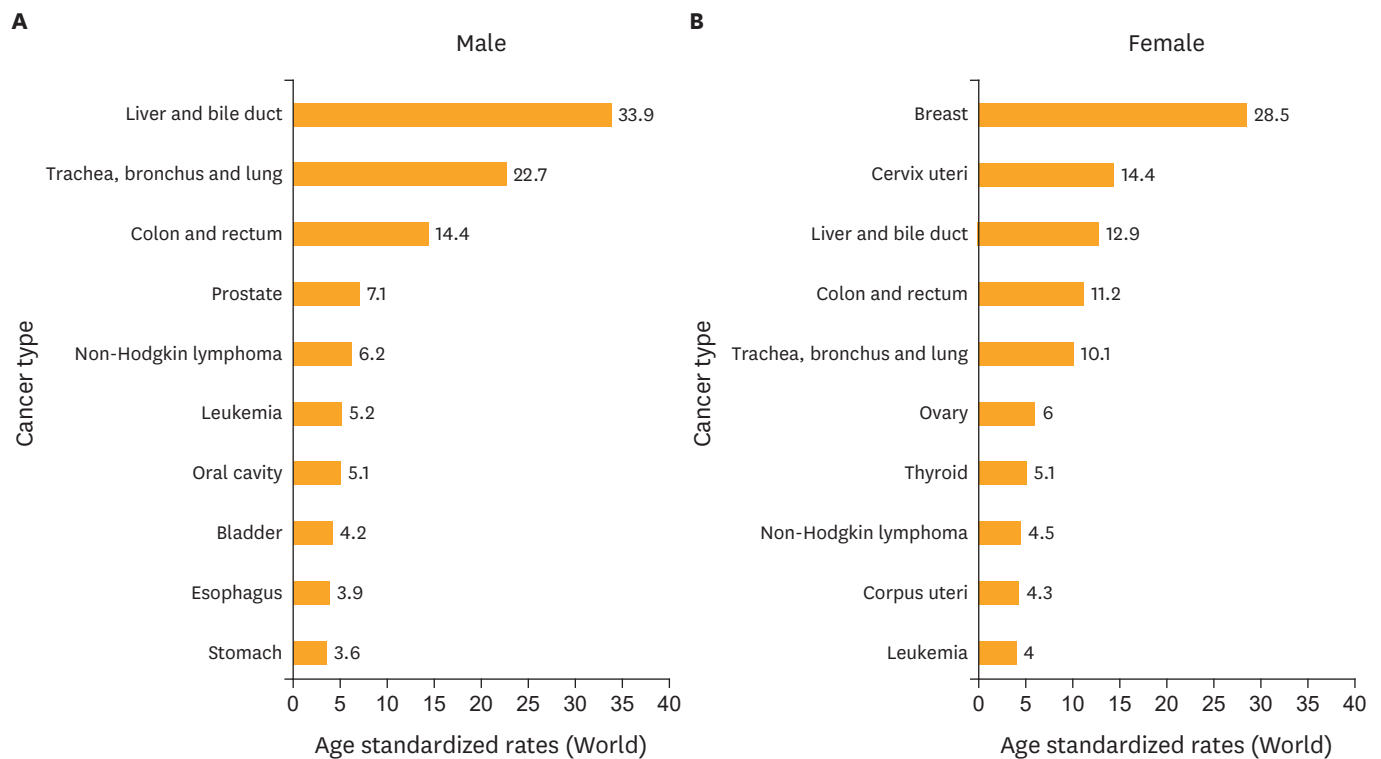


Fig. 1. Top ten cancers in Thailand for each gender (estimated), 2011 [4].

most prevalent type of cancer in women is breast cancer (ASR=28.5) followed by cervical cancer (ASR=14.4). In third place is liver and bile duct cancer, followed by colon and rectum cancer; trachea, bronchus and lung cancer; ovarian cancer (ASR=6.0); thyroid cancer; non-Hodgkin lymphoma; and the ninth most common is uterine cancer (ASR=4.3). In sum, three of the most prevalent types of cancer in Thai female are gynecologic cancer, with cervical cancer being the second most prevalent, ovarian cancer being the sixth followed by uterine cancer being the ninth most common cancer. It is interesting to note that the ASR for cervical cancer fell from 24.7 in 1999 to 14.4 in 2011, whilst the ASR for ovarian cancer increased from 5 in 1999 to 6 in 2011. Notably, uterine cancer did not appear in the top ten leading cancers for women until 2005, in which it was ranked as the tenth most common cancer in women (ASR=3.6) [2,3].

It might also be beneficial to examine the primary caregiver for gynecologic cancer in Thailand. According to the data from the Thai Gynecologic Cancer Society, Thai Association of Radiation Oncology, and Thai Society of Cytology, as of 2016, there are 260 gynecologic oncologists, 130 radiation oncologists and 500 cyto-technicians/screeners [4-6]. This is a significant improvement from 2004 as there were only 110 gynecologic oncologists, 101 radiation oncologists and 386 cyto-technicians/screeners [2].

GYNECOLOGICAL CANCER

1. Cervical cancer

In 2011, cervical cancer was most common in Lamphun province (ASR=24.6), whereby its prevalence is higher than the national average (ASR=14.4). The maximum point of incidence is approximately from the age of 45–70 years. Once after the age of 75, the incidence rate started

to decline. The data from the ministry of public health and ministry of education indicated that the most prevalent histological type of cervical cancer that has been microscopically verified was squamous cell carcinoma (approximately 80%) with adenocarcinoma being 13%–28%. The most common stage for this type of cancer in Thailand is the loco-regional stage which can account for 45%–93% of the cases nationwide. The dual tract strategy (Pap smear, and visual inspection with acetic acid [VIA] in low-resource setting area) employed by the government in 2005, appears to be successful in controlling the number of new cervical cancer cases [2]. As in 1999, the ASR for cervical cancer was 24.7. In the future, the government is considering implementing the immunization of human papillomavirus (HPV) into the national immunization program [7]. Through the use of the hospital-based cervical cancer screening program at Chulabhorn Hospital, it was found that there were 4.9% abnormal Pap smear and the overall prevalence rate of HPV was 15.1% (sample size: 5,906) [8]. Thus, if this integration is successful, it could help lower the rate of cervical cancer [9]. Interestingly, although this strategy is efficient, it has been argued that the cost of the HPV vaccination should be lowered to make the integration feasible. In the case of vaccination not being feasible, it has been suggested that HPV DNA testing five times per life-time is adequate [10].

2. Ovarian cancer

The mean ovarian cancer incidence per annum is 6.0 per 100,000 females in 2011. Bangkok, Lamphun and Krabi province had the highest number of incidence comparing to other provinces (ASR=7.3), while the Northeastern region had the lowest number of new cases of ovarian cancer (ASR=4.4). The incidence of ovarian cancer increased from the age of 55 years onward. This shows that there is a later onset of the cancer compared to 1999 where the peak incidence was in the age group 40–65 [2]. The incidence can occur since very young age. Interestingly, the most common histological types of ovarian cancer in 2011 were serous carcinoma followed by mucinous carcinoma and endometrioid carcinoma. This showed a larger variation from the data in 1999 as the two most prevalent histological types were serous and mucinous cystadenocarcinoma [2]. The most common stage of ovarian cancer was local, followed by regional stage.

3. Uterine cancer

In 2011, the mean annual incidence of uterine cancer was 4.3 per 100,000, which showed an increase from 2.8 per 100,000 per year in 1999 [9]. The province found to have the highest number of uterine cancer incidence was Chonburi (ASR=7.7). The most common stages of distribution were local followed by regional stage. Most cases occurred with people at the age of 20 or more. The peak incidence was 55–65 age group.

4. Breast cancer

The ASR of breast cancer in females has been elevated from 20.5 in 1999 to 28.5 in 2011. Incidences can occur from the age of 15 and the overall incidence rate can increase rapidly until reaching its peak at after the age of 60, before levelling off. The most common histological type is ductal carcinoma. The most common stage of breast cancer found in patients is regional stage, followed by local stage.

CONCLUSION

By learning of the epidemiologic data of gynecologic cancer, it is possible to infer new measure for prevention, control and treatment, as this can greatly improve the quality of life for patients. Currently, there are some cancer screening program that has been integrated

into the universal coverage scheme in order to detect cancer early. However, policy maker should still consider allocating resources for nationwide immunization programs to prevent cervical cancer in women which will decrease the mortality rate caused by gynecologic cancer. Additionally, early detection and prevention can also potentially decrease the expense used in the treatment of cancer.

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