

Gynecological Cancer Age Groups at the “Dr. Salvator Vuia” Clinical Obstetrics and Gynecology Hospital during the 2000-2009 Period

Gheorghe FURAU^a; Voicu DASCAU^a; Cristian FURAU^a; Lucian PAIUSAN^b; Adriana RADU^b; Casiana STANESCU^c

^a“Vasile Goldis” Western University of Arad, Faculty of Medicine, Obstetric-Gynecology Department, Romania

^b“Vasile Goldis” Western University of Arad, Faculty of Medicine, Anatomopathology Department, Romania

^c“Vasile Goldis” Western University of Arad, Faculty of Medicine, Anatomy Department, Romania

ABSTRACT

Objectives: The purpose of this study is to statistically compare the mean ages of the patients with gynecologic cancer in our hospital during the 2000-2009 interval.

Material and Methods: The data was collected from the Histopathology Exams (HPE) registers.

Results: Gynecologic cancer was discovered in 1244 cases: 731 cervical cancers, 392 uterine cancers, 82 ovarian cancers, 31 vulvar cancers and eight vaginal cancers.

The mean ages were 52.94 ± 12.96 years for cervical cancer (age range 22-87 years), 61.71 ± 9.06 years for uterine cancer (age range 38-85 years), 51.46 ± 14.28 years for ovarian cancer (age range 18-77 years), and 65.90 ± 9.65 years for vulvar cancer (age range 39-81 years).

After performing Student's test, the statistically significant differences were: cervical vs uterine ($p < 0.000001$), cervical vs vulvar (< 0.000001), uterine vs ovarian (< 0.000001), uterine vs vulvar (< 0.05), and ovarian vs vulvar ($p = 0.000001$). Cervical and ovarian cancer mean ages were not significantly different ($p = 0.33$).

Conclusions: The mean ages of the patients from the groups with five gynecological cancer types from our study are similar to those in literature. Existing screening measures must be applied and new ones must be implemented in order to reduce the burden of gynaecological cancers.

Keywords: cervical cancer, uterine cancer, vulvar cancer, ovarian cancer, vaginal cancer

Address for correspondence:

Voicu Dascau, “Vasile Goldis” Western University Arad, Faculty of Medicine, Department of Obstetrics and Gynecology, no. 5 Episcopiei Street, 310023, Arad, Romania, Phone 0040-744-163891, Fax 0040-257-233195
e-mail: drdascauvoicu@yahoo.com

INTRODUCTION

The mean age for cervical cancer is 51.4 years, with the number of patients evenly divided between the age groups 30 to 39 and 60 to 69 years (1). A retrospective study involving 36,122 patients diagnosed with cervical cancer during a 15 year period (1991-2005) revealed a mean age of 53.9 ± 13.3 years from 1991 to 1995, 55.0 ± 14.9 years from 1996 to 2000, and 56.7 ± 14.7 years from 2001 to 2005 (2).

The average age at diagnosis of endometrial carcinoma is approximately 60 years, although approximately 5% of women are diagnosed younger than age 40, with up to one quarter present before menopause (3). The average age of patients with endometrioid cancer is approximately 63 years, while the average age of patients with nonendometrioid cancer is approximately 67 years (4).

The peak incidence of invasive epithelial ovarian cancer is 56 to 60 years (5). Approximately 80 to 90% of ovarian cancers, including borderline forms, occur after age of 40 years, whereas 30% to 40% of malignancies occur after the age of 65. The median age at diagnosis for sporadic disease is 60 years, although patients with a genetic predisposition may develop this tumor earlier, often in their fifth decade (6). Mean ages for ovarian metastases from other cancer sites in two studies were 55 years (7) and 51 years (8).

The mean age of patients with vaginal cancer is 68 years for invasive cancer and 58 years for *in situ* neoplasia (9). About 80% of patients with vaginal cancer are older than 50 years (10). Squamous cell carcinoma is found most often in women aged 60 or older, while adenocarcinoma is found most often in women aged 30 or younger (11). Primary invasive carcinoma of the vagina is predominantly a disease of elderly women; 70% to 80% of cases are diagnosed in women older than 60 years (12).

Patients with vulvar cancer have a mean age of 62 years in one study (13) and between 65 and 70 years in other studies (14,15).

Data from SEER (16) shows the following:

- from 2004-2008, the median age at diagnosis for cancer of the cervix uteri was 48 years of age. Approximately 0.2% were diagnosed under age 20; 14.3% between 20 and 34; 25.8% between 35 and 44; 23.9% between 45 and 54; 16.4% between 55 and 64;

- 10.6% between 65 and 74; 6.4% between 75 and 84; and 2.5% 85+ years of age (17)
- from 2004-2008, the median age at diagnosis for cancer of the corpus and uterus, NOS was 61 years of age. Approximately 0% were diagnosed under age 20; 1.6% between 20 and 34; 6.1% between 35 and 44; 19.2% between 45 and 54; 31.8% between 55 and 64; 22.1% between 65 and 74; 14.2% between 75 and 84; and 4.8% 85+ years of age (18)
- from 2004-2008, the median age at diagnosis for cancer of the ovary was 63 years of age. Approximately 1.2% were diagnosed under age 20; 3.5% between 20 and 34; 7.3% between 35 and 44; 19.1% between 45 and 54; 23.1% between 55 and 64; 19.7% between 65 and 74; 18.2% between 75 and 84; and 8.0% 85+ years of age (19)
- from 2004-2008, the median age at diagnosis for cancer of the vagina was 68 years of age
- from 2004-2008, the median age at diagnosis for cancer of the vulva was 68 years of age. Approximately 0.1% were diagnosed under age 20; 2.0% between 20 and 34; 7.3% between 35 and 44; 15.9% between 45 and 54; 18.3% between 55 and 64; 17.5% between 65 and 74; 24.3% between 75 and 84; and 14.6% 85+ years of age (20). □

MATERIALS AND METHOD

Data regarding the cases of gynecological cancers diagnosed during the 2000-2009 period was collected from the histopathology department of the hospital and statistically analyzed. □

RESULTS

During the ten year period, a number of 1244 gynecological cancers were diagnosed in our hospital by the histopathology department: 731 cervical cancers (58.76%), 392 uterine cancers (31.51%), 82 ovarian cancers (6.59%), 31 vulvar cancers (2.49%), and 8 vaginal cancers (0.65%); the histological specimens were obtained from biopsies and/or surgery. The mean ages were 52.94 ± 12.96 years for cervical cancer (age range 22-87 years), 61.71 ± 9.06 years for uterine cancer (age range 38-85 years), 51.46 ± 14.28 years for ovarian cancer (age range 18-77 years), 66.25 years for

vaginal cancer (age range 51-81 years), and 65.90 ± 9.65 years for vulvar cancer (age range 39-81 years).

The age groups and percentages for all cancer types and for each type are shown in Figures 1-6; Figure 7 shows the age groups for the four main types and the shift of the age group with the most cases, while Figure 8 compares the mean ages and standard deviations for the four types of cancer with a normal distribution of the cases.

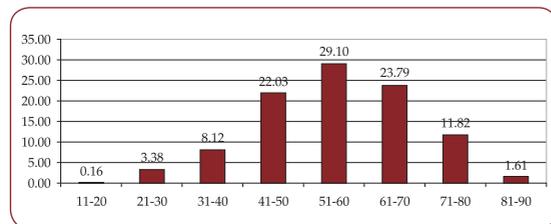


FIGURE 1. Gynecological cancer age groups

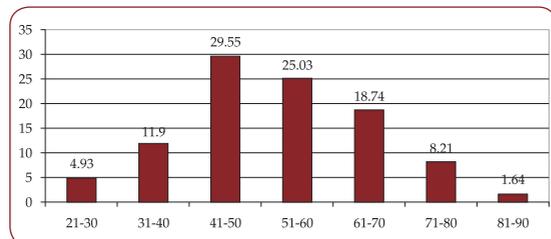


FIGURE 2. Cervical cancer age groups

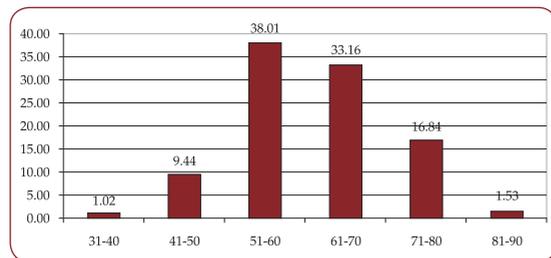


FIGURE 3. Uterine cancer age groups

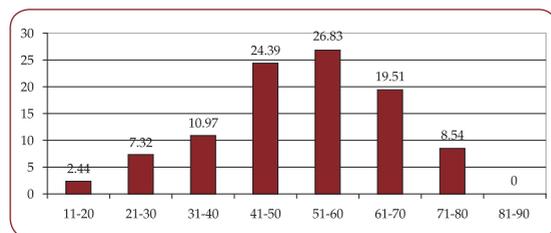


FIGURE 4. Ovarian cancer age groups

We compared the mean ages of the cancer types with normal distribution of the cases by using Student's *t*-test; the results are shown in Table 1. □

Type	p value
Cervical vs. uterine	<0.000001
Cervical vs. ovarian	0.33
Cervical vs. vulvar	<0.000001
Uterine vs. ovarian	<0.000001
Uterine vs. vulvar	<0.05
Ovarian vs. vulvar	0.000001

TABLE 1. Gynecological cancer age comparisons

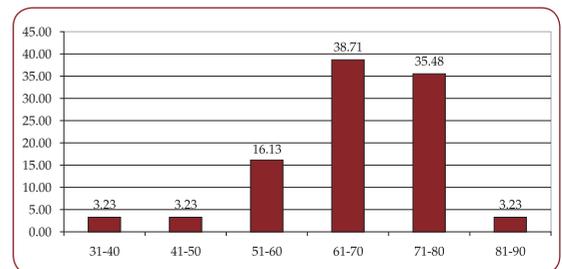


FIGURE 5. Vulvar cancer age groups

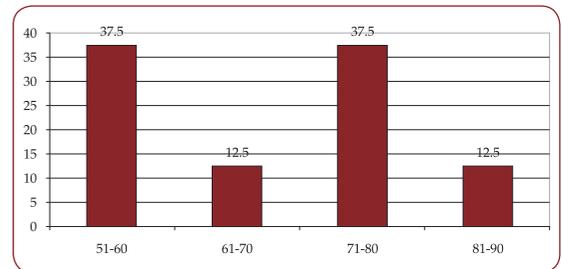


FIGURE 6. Vaginal cancer age groups

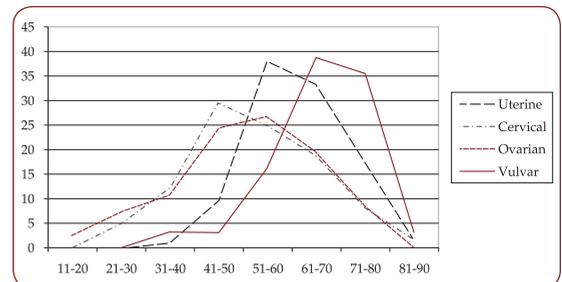


FIGURE 7. Gynecological cancer age groups comparison

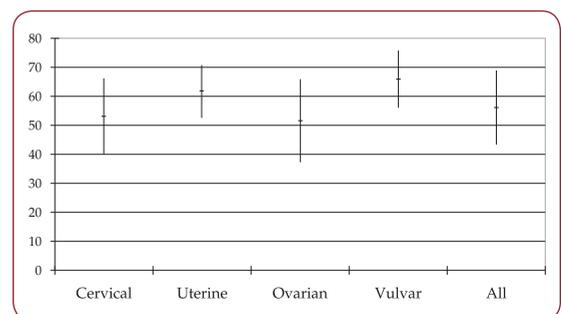


FIGURE 8. Gynecological cancer age groups mean age and standard deviations

DISCUSSIONS, CONCLUSIONS

The mean ages of the patients from the groups with five gynecological cancer types from our study are similar to those in literature:

- 52.94±12.96 years for cervical cancer (731 cases) versus 51.4 years (1), 53.9±13.3 years, 55.0±14.9, 56.7±14.7 (2), and 48 years (17);
- 61.71±9.06 years for uterine cancer (392 cases) versus 60 years (3) and 61 years (18);
- 51.46±14.28 years for ovarian cancer (82 cases) versus 60 (6) and 63 years (19);
- 65.90±9.65 years for vulvar cancer (31 cases) versus 68 (20)

- 66.25 years for vaginal cancer (8 cases), with 68.43 years for invasive cancer (7 cases) versus 68 (9).

Unfortunately, there are still many cases of such cancers, with many cases in advanced and often incurable stages due to several factors, including lack of screening, lack of patient information and patients neglecting signs and symptoms or being afraid of going to the physician.

Paradoxically, more than half of the cases diagnosed in our hospital are cervical cancers, although premalignant cervical conditions are the easiest to diagnose both clinically and by laboratory methods, especially the Pap smear.

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