Surveying the Field of Gynecologic Oncology

By William J. Hoskins, MD

In this issue of *Oncology Spectrums*, we present five articles devoted to gynecologic oncology. Each article is written by an expert in the field and covers a topic that is pertinent to the management of gynecologic cancer. We have restricted our discussion to the three most common gynecologic cancers: cervical cancer, endometrial cancer, and ovarian cancer.

It is estimated that there will be 80,300 new cases of gynecologic cancer in the United States in the year 2001, and that these cancers will result in 26,300 deaths.[1] Figure 1 shows the expected new gynecologic cancer cases, and Figure 2 shows the expected deaths. As can be seen by these figures, endometrial cancer will account for the largest number of new cases of gynecologic cancer, but has the best overall 5-year survival rate. This is due to early diagnosis in the majority of cases and is directly related to the occurrence of a readily identifiable symptom—abnormal vaginal bleeding. As long as patients report abnormal vaginal bleeding to their physician and the physician follows the accepted practice of obtaining a tissue diagnosis to explain the abnormal bleeding, most endometrial cancers will be detected early and the cure rate will be quite high.

The standard therapy for endometrial cancer is total hysterectomy, bilateral salpingo-oophorectomy, and selective sampling of the pelvic and para-aortic lymph nodes. The use of adjunctive radiation therapy is based on the cell type of the cancer, the depth of invasion, the presence or absence of cervical involvement, and whether the cancer involves lymph nodes. Dr. Perry Grigsby has provided an excellent review of the use of radiation therapy as adjunctive therapy in endometrial cancer.

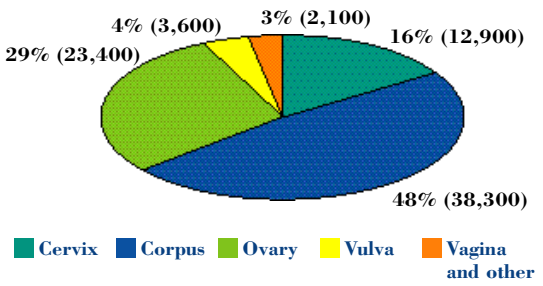
Table I shows the relative survival rates for patients with endometrial cancer over the past 2 decades. While the survival is quite good, there has been little improvement in cure rates. Of particular note in Table I is the disparity in survival rates of Caucasian women vs African-American women. This appears to be due to a biologic difference, with African-American women having a higher percentage of more aggressive cancers.

In the past 5 years, more women have been managed by laparoscopically-assisted vaginal hysterectomy and laparoscopic pelvic and para-aortic lymphadenectomy. Although definitive data are still being compiled, it appears that in the future, this will become the surgical procedure of choice for women with endometrial cancer.

The incidence of cervical cancer continues to decline in the United States, and is clearly the result of regular screening of the majority of the population using the Pap smear. In underdeveloped countries, where women do not have regular Pap smear screening, cervical cancer is still the leading cause of cancer death in women. Most cervical cancers in the United States are prevented by the diagnosis and treatment of precancerous lesions, and of those invasive cancers detected, almost half are diagnosed while still confined to the cervix (stage I), where the cure rate is 85–90%.

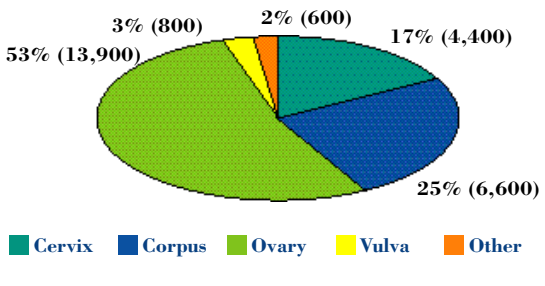
Table I shows the improvement in survival rates in cervical cancer over the past two decades, and this

FIGURE 1. ESTIMATED GYNECOLOGIC CANCERS: 2001



Hoskins W. *Oncology Spectrums.* Vol 2. No 5. 2001.

FIGURE 2. ESTIMATED DEATHS FROM GYNECOLOGIC CANCERS: 2001



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improvement is probably a continued influence of screening by the Pap smear. As survival data on patients currently being treated becomes mature, we should expect even more improvement in survival due to the recent use of multimodality therapy in cervical cancer. Drs. Case and Stehman have provided an elegant summary of the data supporting multimodal therapy of cervical cancer. Improvements demonstrated in several clinical trials of multimodal therapy over the past decade are likely to result in improved survival of patients with locally advanced cervical cancer.

Ovarian cancer accounts for less than one third of all gynecologic cancers (Fig. 1), but results in over 50% of the deaths from gynecologic cancer (Fig. 2). As demonstrated in Figure 3, the cure rate of ovarian cancer, stage for stage, is little different from that for either cervical or endometrial cancer. Unfortunately, as shown in Figure 4, the majority of ovarian cancers are diagnosed with distant spread (stage III or IV), where the cure rate is quite poor. This is due to the lack of specific early symptoms (as with endometrial cancer), or the availability of a good screening test (as with cervical cancer).

Despite the lack of a method to diagnose early ovarian cancer, there has been a significant improvement in survival over the past two decades (Table I). This improvement in survival is related to better initial surgery, as described by Drs. Coukos and Rubin, and the availability of better chemotherapy, as described by Dr. Markman.

Median survival for advanced ovarian cancer has increased from about 12 months in the late 1960s and early 1970s to about 36 months in the year 2001. This improved survival is due to improved remission rates and remission duration, and is the direct result of improved surgery and new chemotherapeutic agents. This prolongation of remission intervals has resulted in improved quality of life and improved overall survival for women with ovarian cancer. Today, the majority of women with ovarian cancer can achieve remission. Nevertheless, most of the women who achieve remission will eventually experience a recurrence and die of their disease. Our major challenges for the decades ahead are to devise better methods for early diagnosis and to develop consolidation therapies to prevent the recurrence of ovarian cancers that are in remission.

In this issue of *Oncology Spectrums*, we have attempted to give the reader an overview of diagnosis and staging of gynecologic cancer (Dr. Miller) and a review of the treatment of cervical, endometrial, and ovarian cancers. We have made significant progress in the past two decades. Today, as we enter the third millennium, there are rapid advances in our understanding of the molecular genetics, growth, and spread of human cancer. We sincerely hope that in the not too distant future, the diagnostic techniques and therapies we have described in this issue will seem quite primitive compared to future techniques and therapies. OS

TABLE 1. TRENDS IN 5-YEAR SURVIVAL RATES BY RACE AND YEAR OF DIAGNOSIS: UNITED STATES

	White			Black		
Site	74–76	80–82	89–96	74–76	80–82	89–96
Corpus	89	83	86	61	55	57
Cervix	70	68	72	64	61	59
Ovary	37	39	50	41	38	48

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FIGURE 3. % 5-YEAR RELATIVE SURVIVAL BY STAGE AT DIAGNOSIS: 1989–1996

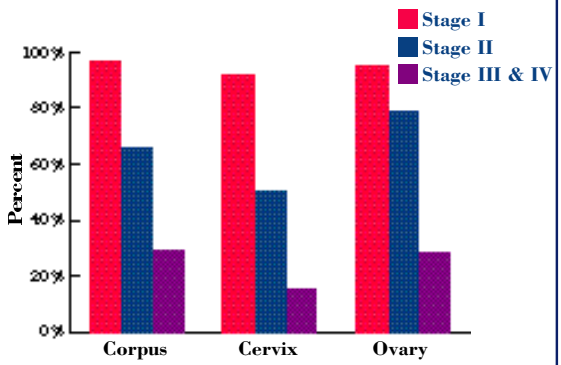

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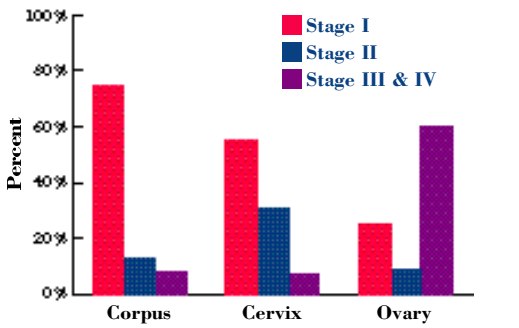
FIGURE 4. DISTRIBUTION OF CANCER CASES BY STAGE AT DIAGNOSIS: 1989–1996



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1. Greenlee RT, Hill-Harmon MB, Murray T, Thun M. Cancer statistics, 2001. *CA Cancer J Clin.* 2001;51:15-36.