

2007 Annual Report of the Cancer Center @ GBMC

(Using 2006 Cancer Registry Data)

Cervical Carcinoma by Robert K. Brookland, M.D.

The cervix is that portion of the uterus sometimes referred to as the "birth canal" and extends into the upper portion of the vagina. This enables access to the screening study known as the "Pap test" which has resulted in the sharp decline of invasive cancers since pre-malignant and non-invasive lesions are now detected and treated much more frequently. Success in treating cervical cancer at GBMC reflects the sophistication of gynecologic oncology services, which far exceeds the capabilities of other community hospitals in the Baltimore area.

The result has been a steady decline in the number of invasive cancers. Approximately 9700 new cases of cervical cancer were diagnosed in 2006 in the United States, while in Maryland, there were estimated to be 210 women diagnosed that year. Because of screening and early detection, the disease is often detected before symptoms develop. The most common symptom is abnormal vaginal bleeding during or between menstrual periods or after sexual intercourse. Women can also present with vaginal discharge or postmenopausal bleeding.

The most common cause of cervical cancer is an infection by the human papilloma virus (HPV), a risk which is greatest in woman who have multiple sexual partners or begin sexual activity at a young age. Persistence of the HPV infection and progression to cancer can be influenced by suppression of the immune system, cigarette smoking and other factors. Of great importance is the recent availability of two vaccines which by preventing infection from the most common strains of the HPV virus can prevent the development of cervical cancer.

There are several treatment options available to woman with pre-invasive cervical lesions. These include electro-coagulation, cryotherapy, laser resection and limited surgery. For early stage invasive cancers, a wider surgical removal or radiotherapy is considered. For women who present with more advanced cancers, recent studies have indicated that outcomes can be improved by adding chemotherapy to radiotherapy.

The survival for women with pre-invasive cervical cancer approaches 100%. Even when detected at an early stage of invasion, the 5-year cure rate exceeds 90%. As with most cancers, the success rates decline sharply with more advanced cancers highlighting the importance of prevention and early detection. There were 3700 estimated deaths in 2006 from cervical cancer nationwide.

Table One (below) demonstrates the age at diagnosis of cervical cancer in the year 2006 for our patient population. Table Two (below) reflects the histologic distribution of cervical cancer at GBMC between 1995-2002. The striking difference in our proportion of patients with intraepithelial neoplasia reflects the high rate of patients undergoing PAP studies who have cancers identified by routine screening.

Table Three (below), in similar fashion, shows the large proportion of pre-invasive and early stage disease seen at our institution.

Table Four (below) outlines the 5-year survival of patients treated at GBMC compared with the National Cancer Data Base. There was a superior survival for GBMC patients in all but Stage II. An analysis of Stage II patients revealed why: too few patients for statistical validity and a disproportionate number having co-morbidities such as advanced age (in 80s and 90s), or poor performance status limiting the ability to deliver curative therapies. A greater number of NCDDB patients with Stage II disease could undergo surgery, suggesting a greater percent of patients with Stage IIA vs. IIB disease, an important difference. Finally, fewer patients in the earlier years were receiving combined chemo-radiotherapy (see Table Five) which is now a standard of care.

The treatment of cervical cancer has evolved over the years, and the prognosis has never been better. Development of vaccines can prevent the disease altogether, while screening leads to early detection when the disease is almost always curable. With Francis Grumbine, M.D., Chairman of the Department of Gynecology, and Michael Dillon, M.D., we are fortunate to have two outstanding gynecologic oncologists on our staff. Paul Celano, M.D., is Chief of the Division of Medical Oncology in the Department of Medicine, and has a special interest in gynecologic malignancies. The special expertise of these individuals along with a very caring staff assures the highest quality of care for our patients. Newer technologies at

GBMC now permit many of our cases to be treated as outpatients. Even for the most advanced cancers, the combination of chemotherapy with radiotherapy has improved survival. And overall our survival rates have been superior to those seen in the National Cancer Data Base.

Table 1

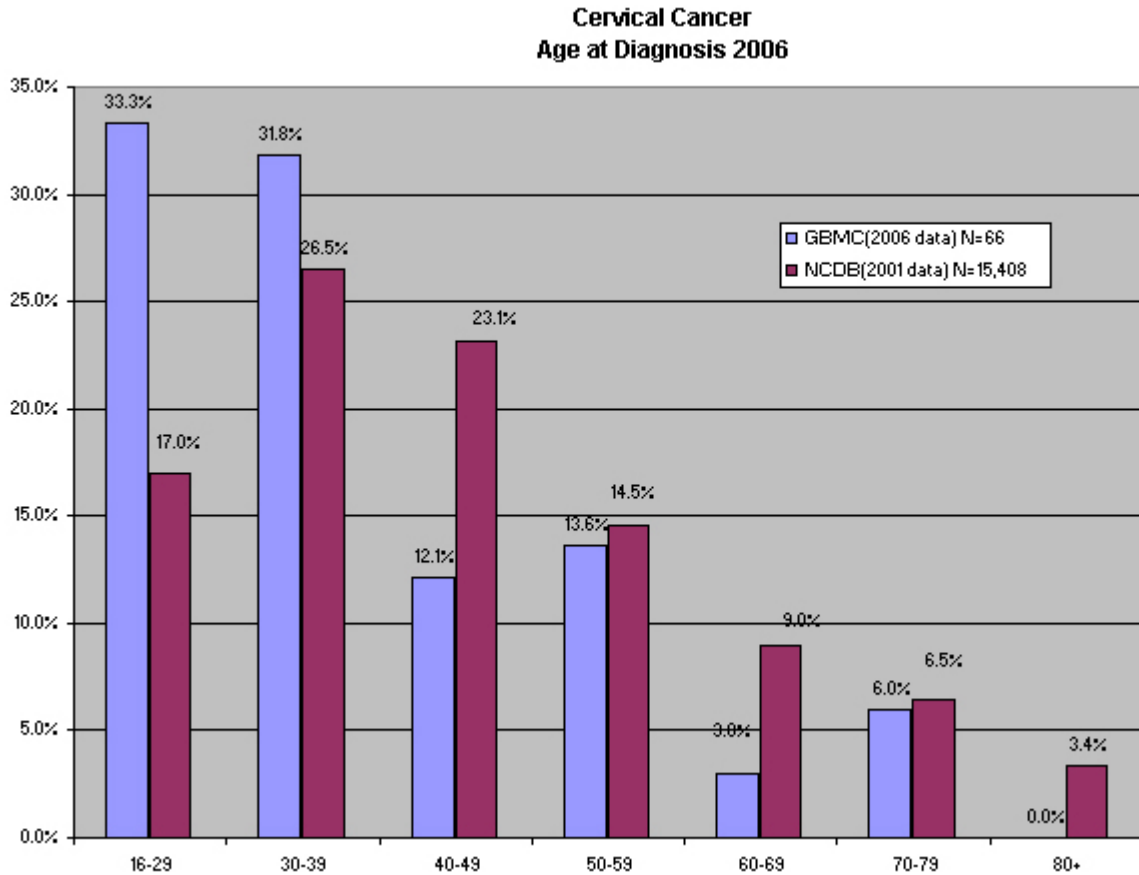


Table 2

**CERVICAL CANCER
HISTOLOGIES**

HISTOLOGY	GBMC N= (554) % of total	NCDB N= 15,408 % of total
Carcinoma, NOS	0.2%	7.0%
Squamous Cell Carcinoma, NOS	12.6%	41.4%
Keratinizing Squamous Cell Carcinoma, NOS	1.0%	4.2%
Large Cell, Nonkeratinizing Squamous Cell Carcinoma	0.1%	4.1%
Microinvasive Squamous Cell Carcinoma	1.8%	1.7%
Intraepithelial Neoplasia, Grade III (CIN 3)	67.3%	20.7%
Adenocarcinoma, NOS	4.0%	10.8%
Adenosquamous Carcinoma	2.0%	2.3%
Other Specified Types	11.0%	7.7%

Table 3

**Cervical Cancer
Comparison of AJCC Staging**

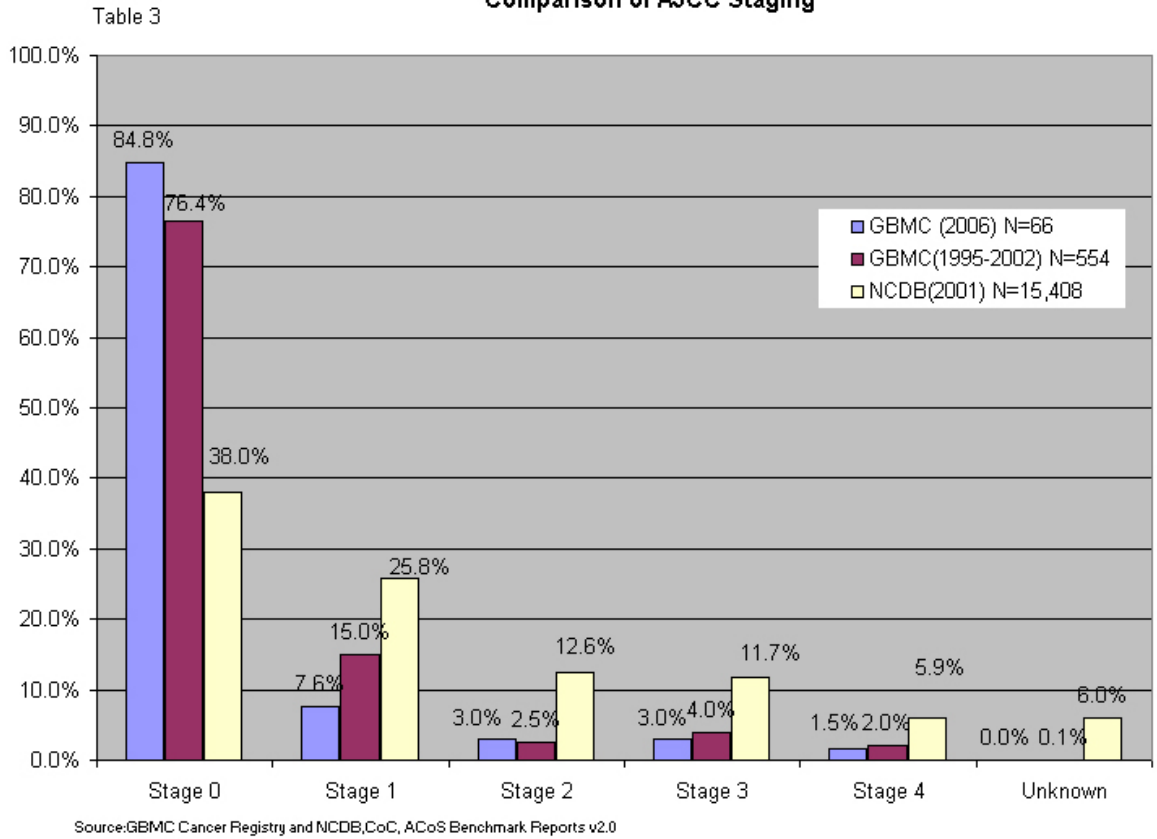


Table 4

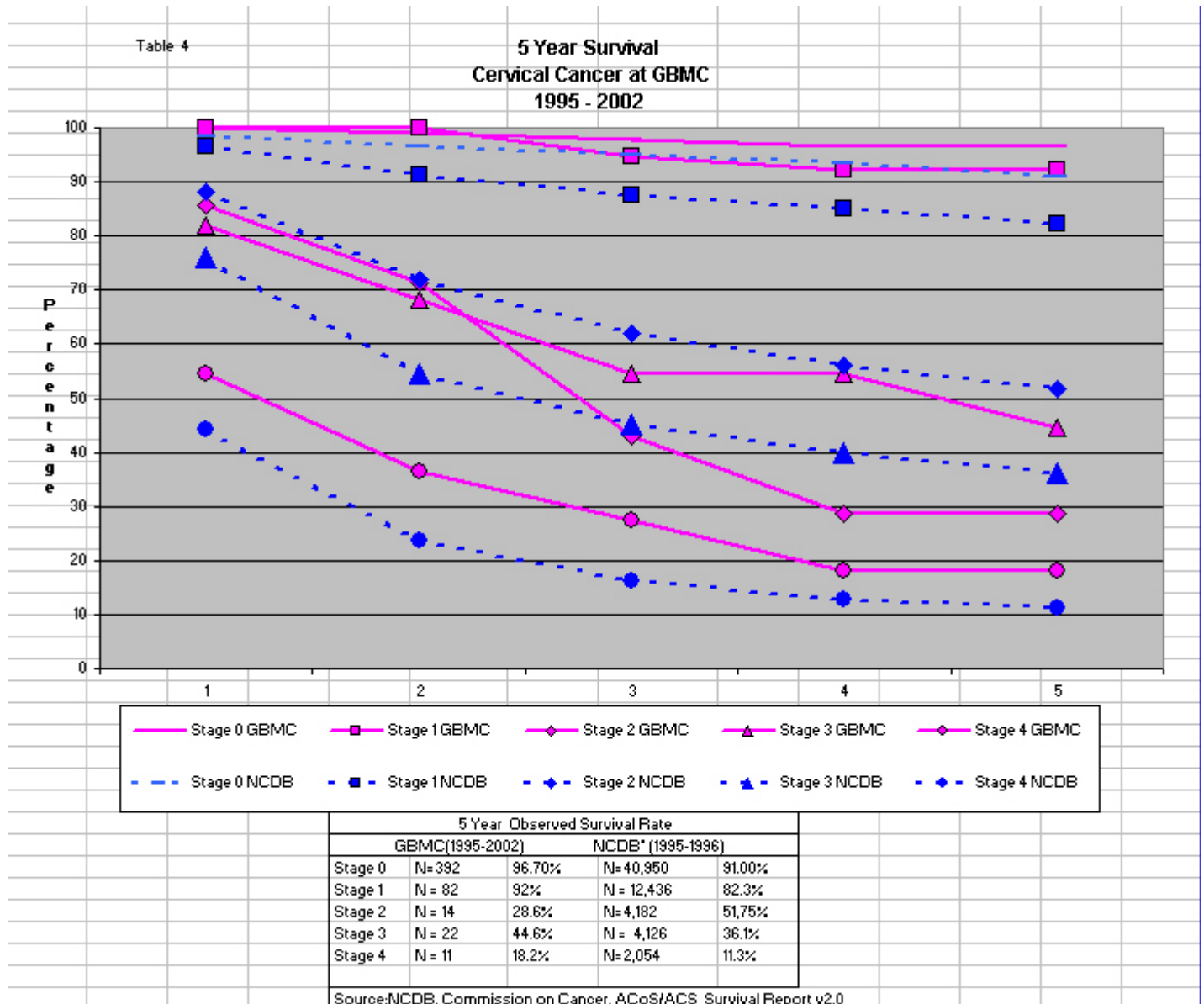


Table 5

