2008 Annual Report
The Sandra and Malcolm Berman Cancer Institute
Greater Baltimore Medical Center

Focus: Carcinoma of the Tonsil

By: Eva Zinreich, M.D.

In 2007 head and neck cancer was the fifth most common cancer with incidence of 780,000 new cases a year worldwide and an estimated 45,000 new cases in the United States. The incidence rate is more then twice as high in men as in women.

Using Cancer Registry data for GBMC, we evaluated patients with advanced stage cancer of the tonsil for the period 1996-2002 and compared the results with the National Cancer Data Base (NCDB). The majority of our patients were Stage III and IV (53 patients). Twelve patients were Stage I and II. The incidence ratio of men/women was 50/16(75.8% / 24.2%) and corresponds to the national numbers. (See Table 1 below)

Compared to current cases (15 patients in 2007), the age distribution has changed slightly since the studied period (1996-2002) with a shift to younger age in 2007 (See Table 2 below).

The 5-year survival of patients treated at GBMC during 1996-2002 compares favorably with the National Cancer Data Base. (See Table 3 below) The 5-year survival for Stage III was 85.7% versus 63.4% and for Stage IV patients it was 62.2% versus 51.7% (GBMC / NCDB). (See Figure 1 below)

The treatment for tonsil cancer in this study period was surgery for early stage cancer. For advanced stage, surgery was followed by post-operative radiation therapy with very few patients receiving post-operative chemotherapy. (See Tables 3a, and 3b)

Since 2000, the treatment of tonsil cancer has changed. For patients with advanced oropharyngeal cancer that includes the base of tongue and the tonsillar fossa, treatment involves organ preservation using radiation therapy and chemotherapy. Surgery is then applicable for residual disease.

At GBMC for advanced nodal involvement (N2-3 patients), we use hyper-fractionated radiation therapy and chemotherapy, followed by neck dissection. Our results with a median follow-up of 27 months showed a survival rate of 83%, and the disease-free survival was 78%. We found at surgery that 20% of our patients still harbor microscopic disease in the neck nodes, thus the need for neck dissection.

To facilitate this multi-modal treatment, we have instituted a multidisciplinary approach.

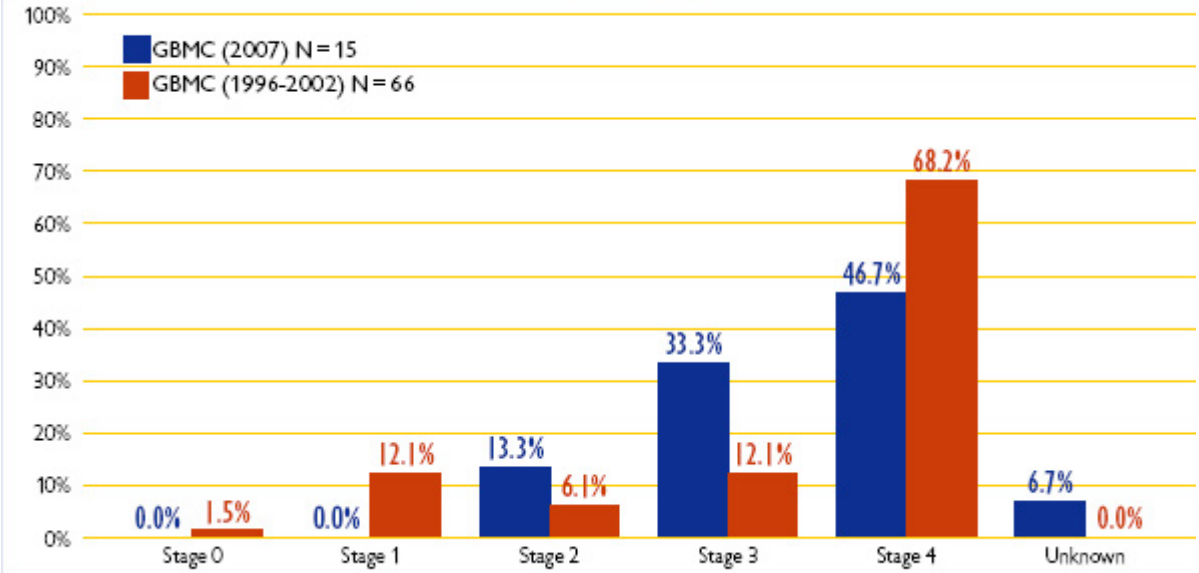
A dedicated head and neck group is in place and includes: head and neck surgeons, radiation and medical oncologists, speech pathologists, social workers, dieticians, nurses and a specialized orthodontist. All members have a major impact in the therapeutic decision-making, keeping in mind that prolonging longevity, maintaining quality of life with least side effects, and preventing complications are the objectives.

Multi-modal treatment in advanced head and neck cancer emerged as the standard of care for these patients. The newest technology affords improved local control and reduces the side effects and complications. Newer radiation techniques such as IMRT reduced the occurrence of local toxicities such as xerostomia and therefore improved the quality of life in our patients. Our intention is to help develop and rapidly adopt treatment advances to provide the highest quality of care and best quality of life for our referred patient population.

While alcohol and tobacco abuse are known risk factors, the presence of the HPV virus in pre-treatment biopsies may also be a factor that may influence the chosen type of treatment and expected response.

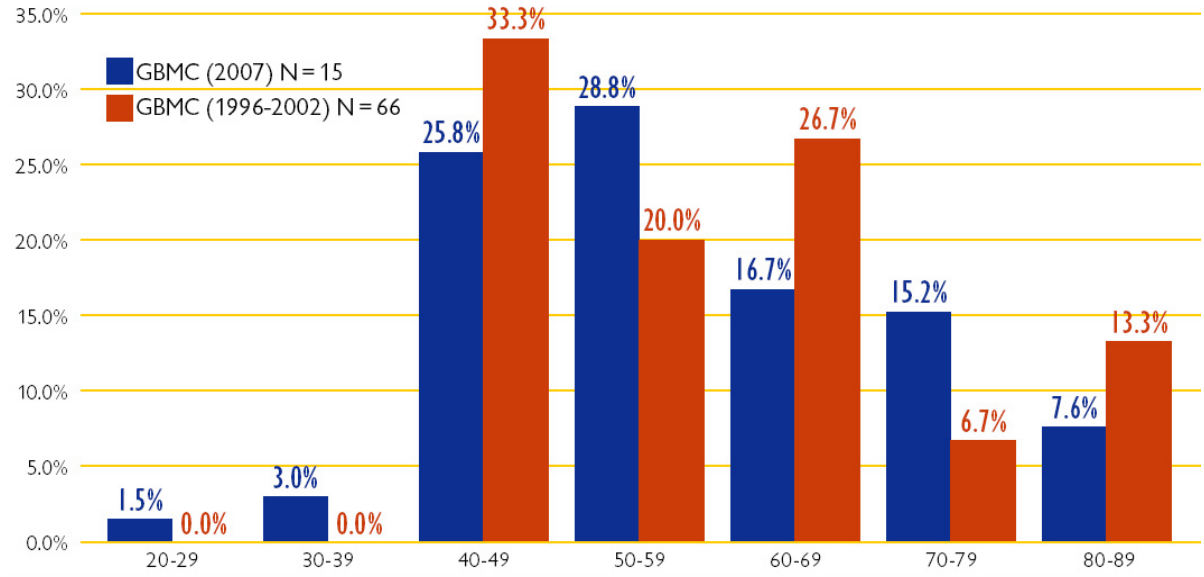
The aim is to be able to predict tumor behavior and the potential for metastasis. Understanding these issues will shape the appropriate selection of optimal therapy.

Table 1 ■ Tonsillar Cancer ■ Comparison of AJCC Staging



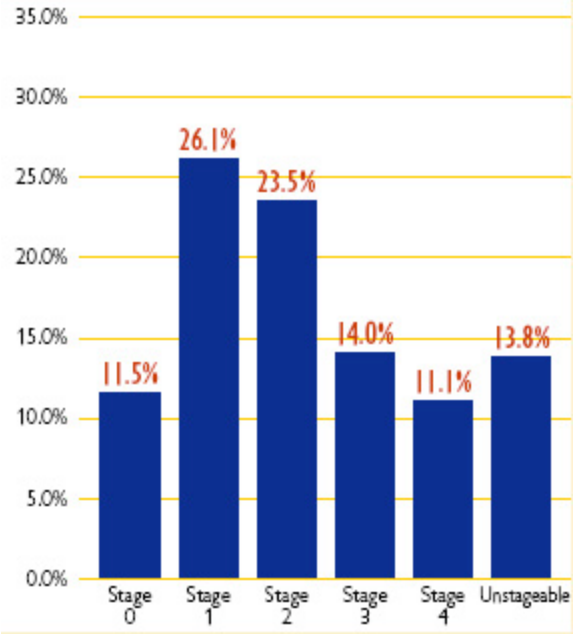
Source: GBMC Cancer Registry

Table 2 ■ Tonsillar Cancer ■ Age at Diagnosis



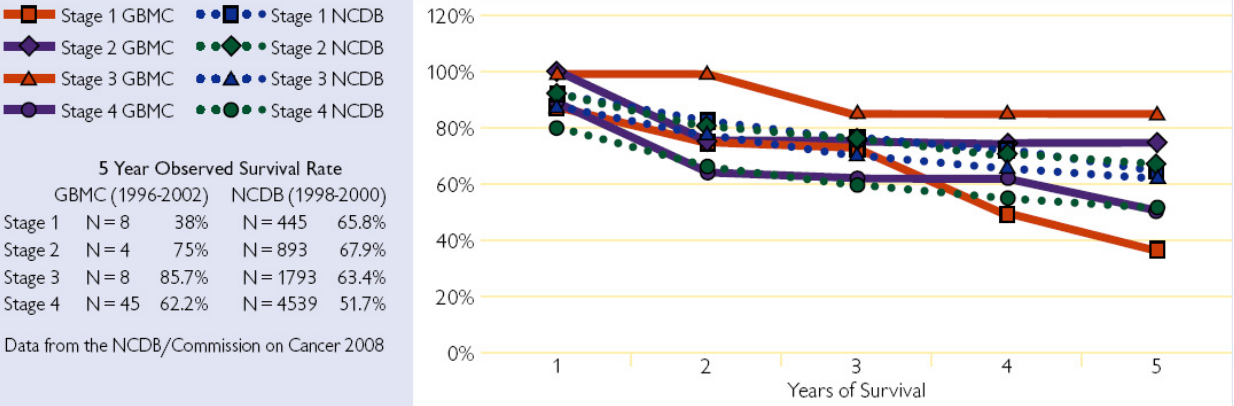
Source: GBMC Cancer Registry

Table 3 ■ AJCC Stage at Diagnosis 2007
Based on 1,918 Analytic Cases



Source: GBMC Cancer Registry – 1,918 analytic cases

Figure 1 ■ Five-Year Survival ■ Tonsillar Cancer at GBMC 1996-2002

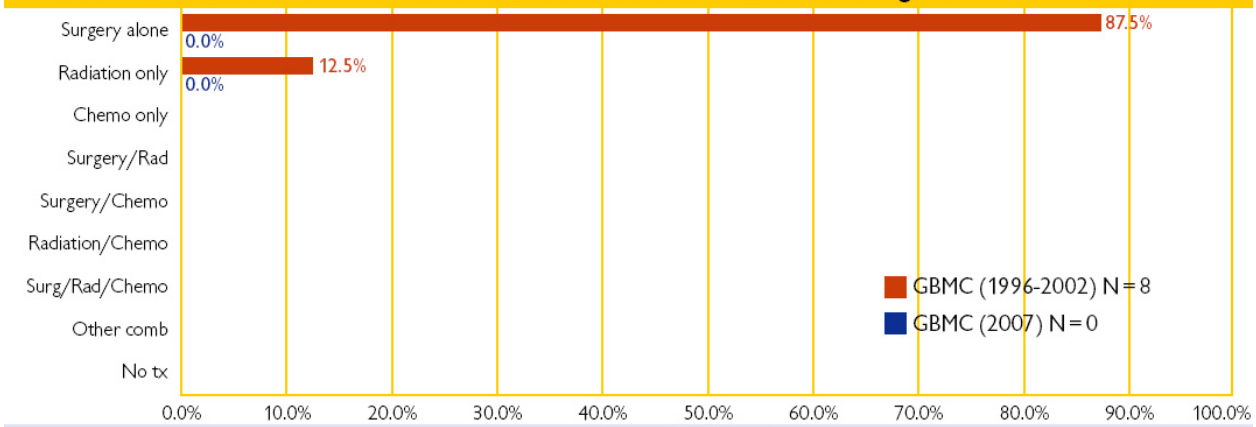


5 Year Observed Survival Rate

	GBMC (1996-2002)		NCDB (1998-2000)	
Stage 1	N = 8	38%	N = 445	65.8%
Stage 2	N = 4	75%	N = 893	67.9%
Stage 3	N = 8	85.7%	N = 1793	63.4%
Stage 4	N = 45	62.2%	N = 4539	51.7%

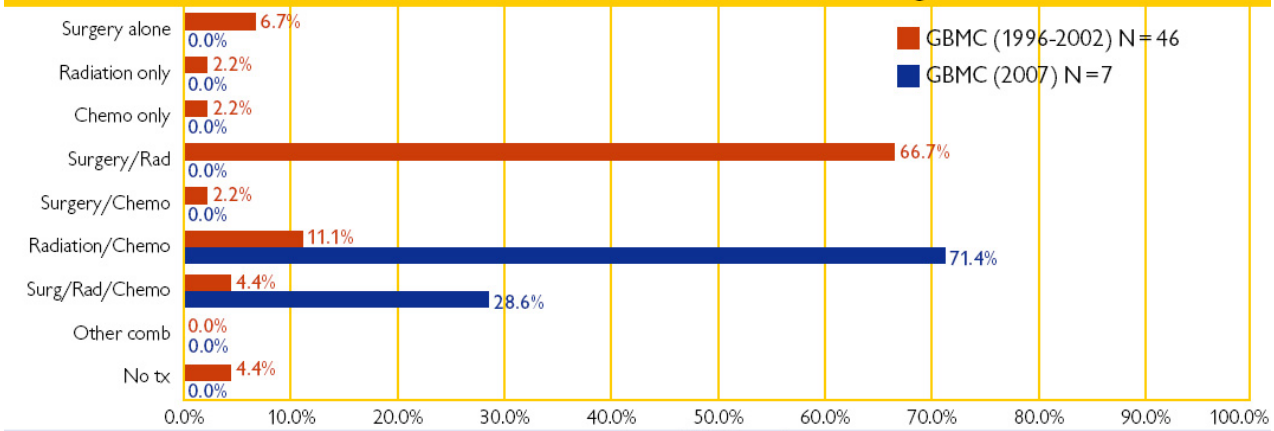
Data from the NCDB/Commission on Cancer 2008

Table 3a ▪ Treatment Combinations ▪ Tonsillar Cancer at GBMC ▪ Stage 1



Source: GBMC Cancer Registry

Table 3b ▪ Treatment Combinations ▪ Tonsillar Cancer at GBMC ▪ Stage 4



Source: GBMC Cancer Registry