

Oral Cancer Disparities: The United States Mortality Rates

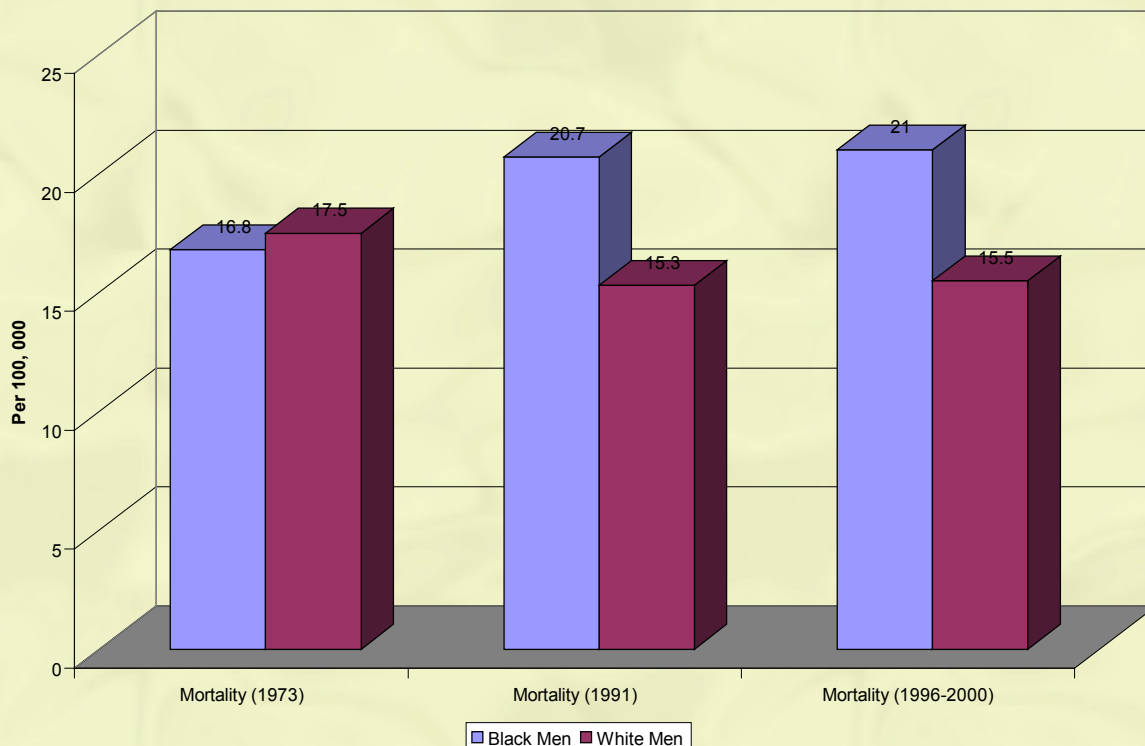
By. Louis Graham, M.P.H.

Oral cancer typically comprises cancer of the lip, tongue, salivary glands, and other sites in the mouth; whereas pharyngeal cancer includes cancers of the nasopharynx, oropharynx, and hypopharynx. Incidence is the frequency of new cancer cases during a distinct period of time, usually expressed as the rate per 100,000 individuals per year; the mortality rate is the frequency of cancer deaths per 100,000 individuals per year. The observed survival rate is the ratio of individuals with cancer who live for a particular period of time following diagnosis, generally 5 years. Evidence for ethnic/racial disparities in oral cancer burden in the United States (US) comes principally from the information collected by national cancer registries¹.

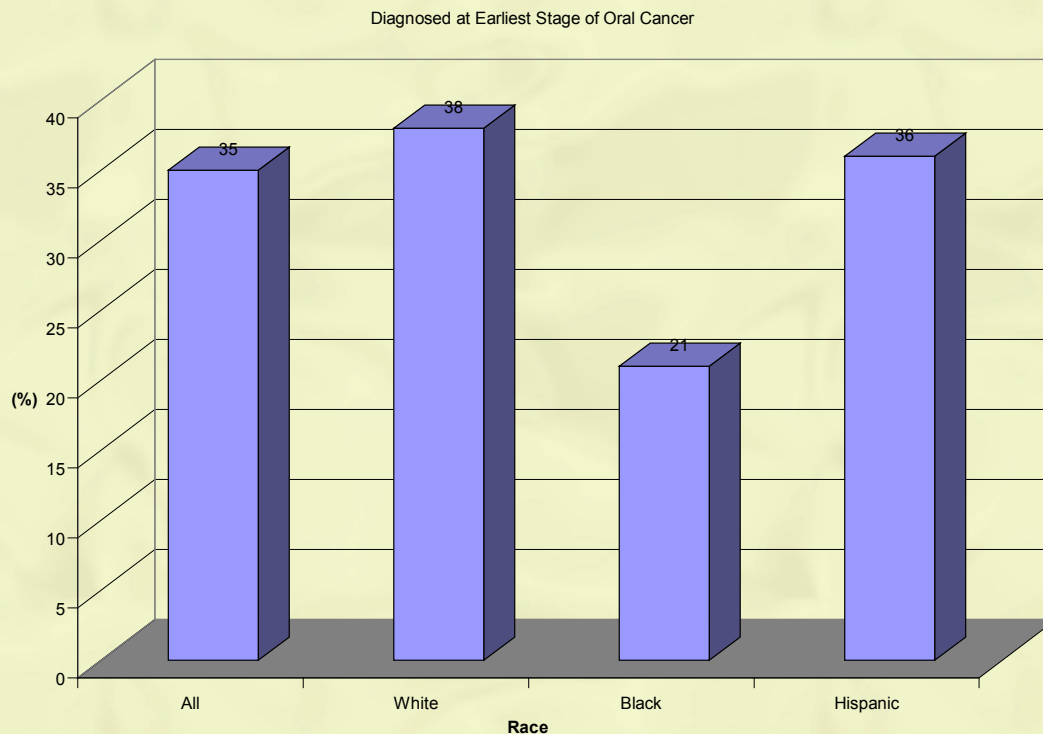
Oral Cancer Disparity Statistics (per 100,000)								
	All	Men	Black	White	Hispanic	Black Men	White Men	Hispanic Men
Mortality (1996-2000)	3	4.5	4.5	2.5	2	8	4	3.5
Incidence (1996-2000)	11	17	12.5	11	6.5	21	16.5	9.5
5-Year Relative Survival Rates (1991)	52.5	50	34	55	N/A	28	N/A	N/A

* Surveillance Epidemiology and End Results Program (SEER) Data

Oral Cancer Death Rates of Males by Race



* Surveillance Epidemiology and End Results Program (SEER) Data



* Surveillance, Epidemiology, and End Results Program, 1996

- Cancers of the oral cavity and pharynx account for 3% of all cancers in the United States.
- Males have 1.5% lifetime risk of developing oral cancer.
- The incidence rate of oral cancers for black males in the U.S. is 1/3 higher than white males.
- From 1973 to 1991, the oral cancer incidence rate increased among black men, but declined slightly for white men.
- In 2003, there were 27,700 new cases of oral cavity and pharyngeal cancer and 7,200 people died from this disease².
- Arbes et al. linking U.S. Census and SEER, established that, by ethnicity alone, the danger of fatality from oral cancer for blacks was 1.7 time that of whites, but that this outcome was abridged to 1.3 by controlling for socioeconomic status³.

Determinants of Racial Gaps

- *Tobacco and Alcohol*: Because 75% of the cases of oral cancer in the US are linked with tobacco smoking and heavy alcohol use⁴, a higher prevalence of these behaviors within marginal groups may aid in explaining their higher incidence rates of oral cancer.
- *Diet*: Diets high in fruits and vegetables have been shown to provide protection⁵, most likely due to the recognized antioxidant activities of the micronutrients within these foods, chiefly beta-carotene, but also vitamins A,C,E, and selenium⁶.

- *Late Stage / Large Tumor Size at Diagnosis*
- *Lack of Patient Awareness and Access to Care:* Regrettably, those at increased risk are frequently the least conscious of this disease and have decreased access to and use of health care services, which reduces the opportunity for screening. Data from the National Health Interview Survey demonstrate that roughly 64% of the U.S. population reported going to the dentist in 1999⁷.
- *Lack of Screening by Dental and Medical Professionals:* Just a fraction of Americans get an oral cancer exam. A recent study based upon the 1998 NHIS survey signifies that only 20.1% of adults have ever received such an examination⁸, and blacks⁹, Hispanics¹⁰, and patients with low educational attainment¹¹ are considerably less likely to have had such an examination.
- *Other Health Care Provider-Related Factor*

(Endnotes)

- 1 Kerr AR, Changrani JG, et al. An Academic Dental Center Grapples with Oral Cancer Disparities: Current Collaboration and Future Opportunities. *Journal of Dental Education*. 2004;531-541
- 2 Cancer facts and figures. Atlanta: American Cancer Society, 2003.
- 3 Arbes SJ, Jr., Olshan AF, et al. Factors contributing to the poorer survival of black Americans diagnosed with oral cancer (United States). *Cancer Causes Control* 1999; 10:513-23.
- 4 Blot WJ, McLaughlin JK, Winn DM, et al. Smoking and drinking in relation to oral and pharyngeal cancer. *Cancer Res* 1988; 48:3282-7.
- 5 Winn DM. Diet and nutrition in the etiology of oral cancer. *AM J Clin Nutr* 1995;61:437S-445S.
- 6 Zain RB. Cultural and dietary risk factors of oral cancer and precancer: a brief overview. *Oral Oncol* 2001;37:205-10.
- 7 Wall TP, Brown LJ. Recent trends in dental visits and private dental insurance, 1989 and 1999. *Jam Dent Assoc* 2003;134-621-7.
- 8 Macek MD, Reid BC, Yellowitz JA. Oral cancer examinations among adults' knowledge or oral cancer and having oral cancer examinations. *J Public Health Dent* 1998;58:281-7.
- 9 Horowitz Am, Moon HS, Goodman HS, Yellowitz JA. Maryland adults' knowledge of oral cancer and having oral cancer examinations. *J Public Health Dent* 1998;58:281-7.
- 10 Canto MT, Durry TF, Horowitz AM. Oral cancer examinations among U.S. Hispanics in 1998. *J Cancer Educ* 2003; 18:48-52.
- 11 Cruz GD, Le Geros RZ, Ostroff JS, Hay JL, Kenigsberg H, Franklin DM. Oral cancer knowledge, risk factors and characteristics of subjects in a large oral cancer screening program. *J Am Dent Association* 2002; 133:1064-71 (quiz 1094).