

PROSTATE CANCER: THE STAGE DISADVANTAGE IN THE BLACK MALE

Paul V. Targonski, MPH, Patrick Guinan, MD, MPH, and Clyde W. Phillips, MD
Chicago, Illinois

In an effort to determine the impact of race on the stage of prostate cancer at presentation, the records of 2102 patients diagnosed in Chicago between 1985 and 1987 were reviewed. For each of three age groups (<65, 65 to 75, and >75 years), blacks had a significantly ($P<.05$) lower percentage of localized stage disease than whites. Inasmuch as stage at diagnosis is inversely related to survival, these data may explain in part why prostate cancer mortality in every age category is higher for blacks than whites nationally. (*J Natl Med Assoc.* 1991;83:1094-1096.)

Key words • prostate cancer • blacks • stage

The cancer disadvantage for blacks compared with whites has recently been emphasized.¹ This is especially true for prostate cancer. An estimated 106 000 new cases of prostate cancer will be diagnosed in 1990,² and estimates suggest that the incidence of prostate cancer will soon exceed that of lung cancer in males. However, these incidence figures combining both black and white cases hide the real negative impact of this disease on US black male mortality rates.

This article examines incidence data for Chicago males to determine if the stage of prostate cancer at diagnosis might be more adverse in black males compared with white males and therefore partly

responsible for the high mortality rates noted in black males in the United States.

Similar studies of the prostate cancer rate differentials between blacks and whites have been conducted in other metropolitan areas. The Drew/Meharry/Morehouse Consortium Cancer Center compared cancer rate differentials between blacks and whites in three locations: Los Angeles, metropolitan Atlanta, and Nashville-Davidson County. This study revealed higher prostate cancer rates among blacks at each site. The Chicago data are consistent with this observation. The collective efforts of studies of this type will aid investigators in designing prevention and control programs aimed at reducing the cancer rate in black populations.³

MATERIALS AND METHODS

Incidence data that included race, age, and stage at diagnosis were collected from the Illinois Department of Public Health Tumor Registry for 1985 through 1987. There were 2237 cases of prostate cancer reported in Chicago, 2102 of which had complete information. Statistical analyses and calculations were performed with the SPSS statistical software package (SAS Institute Inc, Cary, North Carolina) on an IBM 3050 mainframe computer.

RESULTS

Data from 2102 Chicago men diagnosed as having prostate cancer between 1985 and 1987 were collected. There were 787 black men and 1315 white men. Patients fell into the following age groups: 338 were younger than the age of 65, 837 were between the ages of 65 and 75, and 927 were over the age of 75 (Table).

Patients were diagnosed with localized prostate cancer (1278), regional prostate cancer (263), and distant prostate cancer (561). For all age groups, black

From the Epidemiology and Biostatistics Program, School of Public Health, University of Illinois at Chicago; the Division of Urology, University of Illinois Hospital; and the Hektoen Institute for Medical Research, Chicago, Illinois. Requests for reprints should be addressed to Dr Clyde W. Phillips, University of Illinois School of Public Health, 2121 W Taylor St, Chicago, IL 60612.

TABLE. AGE AT DIAGNOSIS BY RACE

Age	Race		Total
	Black	White	
<65	168	170	338
65 to 75	307	530	837
>75	312	615	927
Total	787	1315	2102

patients had a lower proportion of localized disease (45% versus 65%, 53% versus 66%, and 54% versus 68% for the <65, 65 to 75, and >75 age groups, respectively) than white patients ($P<.05$). For regional disease, the proportions were relatively similar (18% versus 13%, 12% versus 16%, and 9% versus 10%, respectively), and for distant disease, black patients had higher proportions (37% versus 22%, 35% versus 18%, and 37% versus 22%, respectively) than white patients ($P<.05$) (Figure).

DISCUSSION

While minority populations, both men and women, have significant outcome disadvantages relative to cancer end results,^{4,5} this disadvantage is most apparent in prostate cancer. Nationally, prostate cancer mortality is higher in every age category for blacks than for whites.¹

The larger difference in mortality between blacks and whites relative to the difference in incidence suggests a survival disadvantage for blacks. This may be related to the fact that blacks have a greater proportion of later stage cancers at diagnosis than whites.⁶ The American College of Surgeons' Pattern of Care Study for prostate cancer has demonstrated that blacks are more likely to present with a later stage at diagnosis than whites and consequently have a poorer prognosis.⁷ The previously reported Illinois experience also indicates that blacks have proportionately less localized and more advanced disease at diagnosis than whites.⁸

Chicago is a city with a large population, and previous reports have documented that the national excess black cancer mortality rates are duplicated in Chicago communities.⁹ This article focuses on prostate cancer. Data were obtained from the Illinois Department of Public Health for prostate cancer between 1985 and 1987. The mandatory reporting of cancer statistics included, among other variables, race, age, and stage at diagnosis.

This analysis of the 2102 cases of prostate cancer in Chicago revealed two salient findings. It confirmed

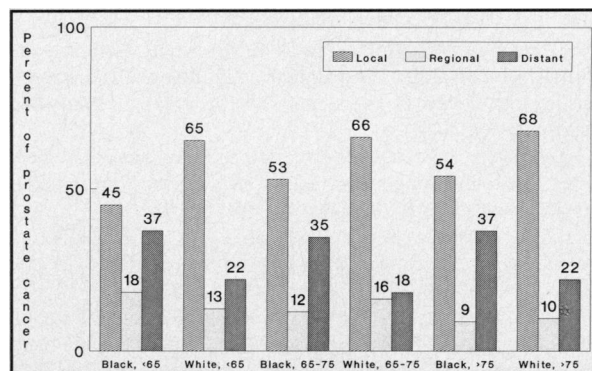


Figure. Percentage of prostate cancer in Chicago by age, race, and stage.

national findings that at diagnosis, black males have a lower proportion of local stage disease and a higher proportion of distant stage prostate cancer compared with white males. Moreover, this finding was constant over the age groups analyzed.

These data also suggest that the disproportion may be even more pronounced for black men under the age of 65. Black males under the age of 65 had localized disease 45% of the time compared with 53% and 54% of localized stage disease for the age groups 65 to 75 and over 75 years, respectively. The striking finding is that white males had localized stage disease in 65% of men under the age of 65, in 66% of men between the ages of 65 and 75, and in 68% of men over the age of 75.

In general, localized stage disease at diagnosis is more amenable to surgical cure. While the data available from this study do not prove that the increased mortality rates in blacks are due to a lower percentage of localized stage of disease at diagnosis in blacks, this hypothesis could be strongly argued.

The causes of these differences in stages at diagnosis have been discussed previously and include the knowledge, attitudes, and practices of the involved communities.¹⁰ This may reflect, in large part, socioeconomic differences rather than racial differences.^{11,12} Until the cultural and socioeconomic differences of the community are resolved, public health efforts must be focused on early detection efforts in the black population, especially for those men under the age of 65.

Literature Cited

1. Secretary's Report on the Task Force for Black Minority Health. Washington, DC: Government Printing Office; 1986. US Dept of Health and Human Services publication NIH 86-1342.
2. Silverberg E, Boring CC, Squires TS. Cancer statistics,

1990. *CA*. 1990;40:9-26.

3. Haynes MA, Wolde-Tsadiq G, Brown P, Semanya K, Ahmed OI, McGrady GA. Cancer rate differential between blacks and whites of three metropolitan areas. *J Natl Med Assoc*. 1989;81:237-241.

4. Dayal HH, Polissar L, Dahlberg S. Race, socioeconomic status and other prognostic factors for survival from prostate cancer. *J Natl Cancer Inst*. 1985;74:1001-1006.

5. Bang KM, White JE, Gause BL, Lefall LD. Evaluation of recent trends in cancer mortality among blacks. *Cancer*. 1988;61:1255-1261.

6. *Surveillance, Epidemiology and End Results' Incidence and Mortality Data*. Washington, DC: Government Printing Office; 1981. US Dept of Health, Education and Welfare publication NIH 81-2330.

7. Natarajan N, Murphy GP, Mettlin C. Prostate cancer in

blacks: an update from the American College of Surgeons' Patterns of Care Studies. *J Surg Oncol*. 1989;40:232-236.

8. Guinan PD, Wigginshoff CC, Rotkin ID, Chmiel US, Sylvester J, Cunningham MP. Prostate cancer in Illinois. *Illinois Medical Journal*. 1984;166:341-345.

9. Phillips CW, Lacey LP. Cancer profiles from several high-risk Chicago communities. *J Natl Med Assoc*. 1987;79:701-704.

10. American Cancer Society, Evaxx Inc. Black Americans' attitudes toward cancer and cancer tests: highlights of a study. *CA*. 1981;31:212-218.

11. Linden G. The influence of social class in the survival of cancer patients. *Am J Public Health*. 1969;59:267-274.

12. Page WF, Kuntz AJ. Racial and socioeconomic factors in cancer survival. *Cancer*. 1980;45:1029-1040.

Help as much as you can.



Together, we can change things.

A Public Service of This Newspaper & The Advertising Council 