

Prostate Cancer Statistics: Anything You Want Them To Be

Prostate cancer is the leading solid tumor in men and through 2016 remained the second leading cause of cancer death in American males. Its prominence, however, has made prostate cancer one of the most controversial diseases. As a common cancer in older men, the costs of screening and treatment can be enormous. With an average age of diagnosis around 68 years of age, most men diagnosed with prostate cancer are in the Medicare beneficiary age range with the government covering the cost of a large proportion of men diagnosed. A peculiarity of prostate cancer is the concept of over diagnosis and overtreatment due to the fact that if a man lives long enough he will most likely develop some form of prostate cancer. Over 70% of men 70-79 years of age will harbor histologic evidence of prostate cancer that may never progress. Most of these older men will die “with” prostate cancer rather than “of” prostate cancer. Many men diagnosed and treated for this disease would never have known or suffered any consequences of these so called “autopsy cancers” as treatment can lead to unnecessary side effects, impaired quality of life and healthcare expenses. This is one of the major arguments against screening for prostate cancer. However the treatment of “older” men with high grade localized prostate cancer and good health status can have a prostate cancer specific survival benefit.

Another classic example of the controversies that surround prostate cancer are the two 2009 publications released simultaneously on two prospective randomized prostate cancer screening trials. The US based PLCO (Prostate, Lung, Colorectal, and Ovarian) Cancer Screening Trial study of 76,000 men failed to demonstrate a reduction in prostate cancer deaths. The ERSPC (European Randomized Study of Screening for Prostate Cancer) based in Europe demonstrated a 20% reduction in prostate cancer death in a group of 182,000 participants. If you wanted to believe in prostate cancer screening you adopted the ERSPC paper. If you were against screening you became a fan of the PLCO study. However, as time has gone on the ERSPC trial continued to show further improvements in the survival data. Alas the PLCO has been hit with widespread criticism since further analysis demonstrated that the majority of men in the “non-screened” control arm in fact had PSA testing at their community health fairs or had the testing ordered by their primary care providers. The control arm was essentially non-existent for the prostate cancer population of PLCO. It does not seem to matter in these discussions against prostate cancer screening that a major study that is the basis of the argument was significantly flawed.

The controversial U.S. Preventive Services Task Force (USPSTF) recommendation not to screen for prostate cancer was circulated for comment in 2011 and officially published in 2012. The group relied heavily on the PLCO data that was cited as central reason for the original USPSTF “do not screen” recommendation. That final “D” recommendation is currently being reevaluated by the USPSTF. These “anti-prostate cancer screening guidelines” have been widely adopted by many health care providers who have reduced their efforts to detect prostate cancer through PSA based screening. The “Choosing Wisely” campaign led primarily by the American College of Physicians has also influenced patients and providers alike to limit PSA based prostate cancer screening. Groups such as the American Cancer Society, American Urological Association and others place more emphasis in shared decision making.

Another example of conflicted interpretation of published prostate cancer data took place in the summer of 2016 and was widely covered by national news outlets. A study from Northwestern University and the University of Chicago suggested that after many years of improved survivals, the number of cases of metastatic prostate cancer was on the rise. The researchers reviewed the National Cancer Database, a repository of data from over 1000 US hospitals from 2004 to 2013 and concluded that there was an increase of 7% per year in metastatic prostate cancer over the last few years. The conclusion strongly suggested that the recommendations of the USPSTF not to screen for prostate cancer were at least in part, the cause of this increase. Others, including a senior official from the American Cancer Society, entered the conversation in newspaper interviews and said that the data presented did not allow anyone to conclude that metastatic prostate cancer is on the rise. But just a few weeks later the American Cancer Society epidemiologists published another paper suggesting a “disturbing trend” that early stage prostate cancer diagnosis was decreasing likely due to less PSA based screening over the last few years.

If these changes in screening will lead to increases in death from prostate cancer in the coming years remains to be determined. With prostate cancer's slow growth characteristics, any change in screening or treatment takes years to evolve, be the impact good or bad.

What cannot be debated is the dramatic progress in survival with prostate cancer death rates falling on average 3.5% each year from 2004 through 2013, representing the latest SEER data available. The five year survival now approaches 99%. While the use of PSA screening has been credited by many for these historic survival improvements, advances in the treatment of localized and advanced disease have also contributed.

Going forward research into optimizing prostate cancer diagnosis and treatment will continue and the debate over these unsettled controversies will persist. New techniques such as MRI fusion biopsy, genetic and genomic studies to more accurately risk stratify men and predict the behavior of a man's prostate cancer and the well documented increase in the active surveillance are successfully addressing many of these controversies.

An analysis of all this prostate cancer data must continue to be discussed in academic and public forums. Ultimately all of this data subject to interpretation and varying opinions must be individualized to each patient in the real world of patient care.

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