Cureus

Patient Age and Decision in Proceeding with Stereotactic Body Radiation Therapy for Men with Newly Diagnosed Prostate Cancer

Open Access
Abstract
Published 03/06/2024

Astrid Sanchez [1], Jonathan Haas [2], Jonathan Lischalk [3], Christopher Mendez [4], Vianca F. Santos [5], Frank Farro [6], Todd Carpenter [3], Seth Blacksburg [7], Moses Tam [8], Aaron Katz [9]

1. Radiation Oncology, Winthrop University Hospital, New York, USA 2. Radiation Oncology, Perlmutter Cancer Center at Nyu Winthrop Radiation Oncology, Mineola, USA 3. Radiation Oncology, Perlmutter Cancer Center, NYU Langone Long Island, Mineola, USA 4. Radiation Oncology, Perlmutter Cancer Center at NYU Langone, Mineola, USA 5. Radiation Oncology, Perlmutter Cancer Center Long Island-NYU Langone Health, Mineola , USA 6. MCIT, Perlmutter Cancer Center Long Island-NYU Langone Health, Mineola, USA 7. Radiation Oncology, Winthrop University Hospital, Mineola, USA 8. Radiation Oncology, NYU Langone Health, New York, USA 9. Urology, Perlmutter Cancer Center at NYU Langone, Mineola, USA

Corresponding author: Astrid Sanchez, astrid.sanchez@nyulangone.org

Categories: Medical Physics, Radiation Oncology
Keywords: prostate cancer

How to cite this abstract
Sanchez A, Haas J, Lischalk J, et al. (March 06, 2024) Patient Age and Decision in Proceeding with Stereotactic Body Radiation Therapy for Men with Newly Diagnosed Prostate Cancer. Cureus 16(3): a1145

Abstract

Objectives:

Prostate cancer is the second leading cause of death in men in the United States. Age at diagnosis often plays an important role in determining the choice of treatment that these patients will pursue. While the median age at diagnosis is 66 there has been an increased incidence of newly diagnosed prostate cancer being seen in younger patients. Historically, these younger patients opted for surgery as their preferred form of treatment and older patients opted for radiation treatment. Stereotactic Body Radiation Therapy (SBRT) is a less invasive, more precise, and faster form of cancer treatment that has risen in popularity as a preferred method of treating prostate cancer. In addition, recent phase III data has shown equivalence in outcome compared to more protracted courses of radiation making SBRT the new standard of care in those patients opting for radiation. Furthermore, data has also shown equivalence in outcome in younger patients when compared to older patients when treated with SBRT. This study will evaluate if age of diagnosis impacts patient decision making in moving forward with SBRT in a single institution.

Methods:

This cohort study analyzed an IRB approved database of which a total of 4659 patients were consulted for prostate cancer between January 2018 and December 2022 at a single institution. Of these patients, 3067 were treated with inhomogeneous-dosed SBRT using a robotic linear accelerator either alone or in conjunction with pelvic IMRT/IGRT for higher risk disease. Patients were stratified into age cohorts consisting of young patients (< 60 years of age), older patients (60-69 years of age) and oldest patients (>70 years old). A total of 823 young patients were seen in consultation during this timeframe. For the older cohort there were 2026 patients seen in consultation and lastly a total of 1810 in the oldest population of patients were seen in consultation. All patients received treatment with a form of SBRT.

Results:

For the 4659 patients evaluated for this study, 3067/4659 (65.8%) opted to proceed with treatment and were treated with inhomogeneous-dosed SBRT using a robotic linear accelerator. Patients were stratified into age cohorts consisting of young patients (< 60 years of age), older patients (60-69 years of age) and oldest patients (>70 years old). A total of 823 young patients were seen in consultation during this timeframe, of which 471/823 (57 %) opted to pursue treatment. For the older cohort there were 2026 patients seen of which 1318/2026 (65%) moved forward with treatment and lastly a total of 1810 in the oldest population of patients were seen with 1278/1810 (71%) opting for treatment. All patients received treatment with a form of SBRT. The mean age for the young patient population (< 60 years of age) was 55, older patient population (60-69 years of age) was 64 and the oldest patient population (>70 years old) was 75. There was a significant difference in percentage of patients opting to proceed with SBRT treatment between the groups as age increased ($p < .001$)

Conclusion(s):

To our knowledge, this is the largest and only series evaluating patient choice in proceeding onto SBRT as a

function of age. Robotic SBRT is an effective and desired treatment in men with prostate cancer across all age groups. We saw an increasing incidence of men choosing SBRT as their treatment as the age of patients increased. While the youngest group had the lowest incidence of proceeding, still more than half of patients in the youngest group opted to proceed with SBRT as their definitive treatment for prostate cancer. In all, a rise in patients across all age cohorts opting for a form of SBRT as their preferred method of treatment can be seen. This may be due to SBRT becoming a more popular choice, being less invasive than other treatment options currently available, and evolving data listing SBRT as the standard of care when choosing radiation. SBRT remains an effective and viable treatment for men with newly diagnosed prostate cancer across all age groups.