

Title	Long-term Outcomes of Radiation Therapy for Prostate Cancer in Elderly Patients Aged ≥75 Years
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# 論 文 内 容 の 要 旨 Synopsis of Thesis

氏 名 Name	中西 絵里奈
論文題名 Title	Long-term Outcomes of Radiation Therapy for Prostate Cancer in Elderly Patients Aged ≥75 Years (75歳以上の高齢前立腺癌患者に対する放射線治療の長期成績)

#### 論文内容の要旨

#### [目 的(Purpose)]

This study aimed to evaluate the treatment outcomes of radiation therapy (RT) for localized prostate cancer in elderly patients aged  $\geq 75$  years.

#### 〔方法ならびに成績 (Methods/Results)〕

#### Patients and Methods:

We retrospectively investigated data of patients aged ≥ 75 years with prostate cancer who underwent intensity-modulated radiation therapy (IMRT) or volumetric modulated arc therapy (VMAT) with doses of 70-78 Gy in 35-39 fractions between September 2008 and June 2016. Overall survival (OS), recurrence-free (RF) rates, and occurrence rates of toxicities were calculated. As an additional investigation of adverse events, the relationship between Grade 2 or higher haematuria, rectal haemorrhage, and the status of usage of antiplatelet drugs and anticoagulants was analysed.

#### Results:

Eighty-eight patients were enrolled in the study. The median follow-up'time was 83.5 months. The median age was 77 years. Nineteen patients died, and nine patients reported PSA failure within the follow-up period. Within the follow-up period, clinical recurrence was observed in two patients. In the cohort, 6 were low-risk, 36 were intermediate-risk, and 46 were high-risk patients. The 5-/7-year OS and RF rates were 87.9%/80.2% and 93.5%/89.1%, respectively. By risk group, the 5- and 7-year OS rates were 100% and 100% in the low-risk cohort, 85.6% and 82.2% in the intermediate-risk cohort, and 88.2% and 75.3% in the high-risk cohort, respectively. By risk group, the 5- and 7-year RF rates were 100% and 80.0% in the low-risk cohort, 100% and 100% in the intermediate-risk cohort, and 87.6% and 82.7% in the high-risk cohort, respectively. The cumulative incidence rates of Grade ≥ 2 genitourinary and gastrointestinal toxicities were 44.0% and 16.4% at 5 years and 48.5% and 16.4% at 7 years, respectively. The cumulative incidence rates of Grade ≥ 3 genitourinary and gastrointestinal toxicities were 1.3% and 3.5% at 5 years and 3.3% and 3.5% at 7 years, respectively. Thirty-eight (43.2%) patients were receiving antiplatelet or anticoagulant medications during the RT period. The cumulative incidence rates of Grade ≥ 2 haematuria at 5 and 7 years were 8.6% and 12.0% for those taking antiplatelet or anticoagulant medications and 0% and 3.5% for those not, respectively. Those taking these drugs showed significantly higher cumulative incidence rates of Grade 2 or higher haematuria. As for Grade 2 or higher rectal haemorrhage, no association was found between the status of usage of these drugs.

#### 〔総 括(Conclusion)〕

IMRT and VMAT are effective treatment options for elderly patients with prostate cancer and in a good general condition.

## 論文審査の結果の要旨及び担当者

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### 論文審査の結果の要旨

本研究の目的は、大阪大学医学部附属病院において、2008年9月から2016年6月の期間に強度変調放射線治療(IMRT)による前立腺癌の根治的放射線治療を受けた、75歳以上の高齢者における長期予後と副作用を後方視的に解析することである。

88名の対象患者の背景は、年齢の中央値が77歳、経過観察の中央値が83.5ヶ月、Performance Statusは90%の患者で0であった。線量処方は70-78Gy/35-39分割であった。19名が死亡し、PSA再発を9名で認め、臨床的再発を2名で認めた。患者全体の全生存率は5年で87.9%、7年で80.2%、無再発率は5年で93.5%、7年で89.1%であった。リスク別での無再発率は、高リスク群で5年:87.6%、7年:82.7%、中間リスク群で5年:100%、7年:100%、低リスク群で5年:100%、7年:80%であった。Grade3以上の晩期副作用の発生割合は尿路系で5年:1.3%、7年:3.3%、消化器系で5年:3.5%、7年:3.5%であった。

75歳以上で全身状態が良好な前立腺癌患者には、放射線治療は有用な治療選択肢であると考えられた。高齢前立腺癌、 患者の長期的な治療成果については既存の報告が少なく、本研究は学位論文に値する。