

Bölüm 3.3

PROSTAT KANSERİNDE RADYOTERAPİ

İlknur HARMANKAYA¹

Didem KARAÇETİN²

GİRİŞ

Prostat kanseri tedavisinde hastalığın evresine göre farklı tedavi seçenekleri bulunmaktadır. Radyoterapi her risk grubunda tedavi seçenekleri arasında yer almakla birlikte tedavi kararı hastanın tercihinin de göz önünde bulundurulduğu multidisipliner bir yaklaşımla verilmelidir.

RİSK DEĞERLENDİRMESİ

Prostat kanserinin organa sınırlı hastalık, lokal yayılım ve metastaz varlığı belirlenerek progresyon riskinin, hastalığa dair onkolojik sonuçlarının öngörülmesi ve tedavi yönetiminde gerekli durumlarda daha agresif tedavinin seçiminde kılavuz rol oynaması sebebiyle T evresi, serum PSA (prostat spesifik antijen) düzeyi, Gleason skoru ve biyopside belirlenen tümör hacmini kullanan risk grupları, risk skorları ve pek çok nomogram tanımlanmıştır (1,2). National Comprehensive Cancer Network risk grubu sınıflaması en sık kullanılan sınıflamalardan biridir (Tablo 1)(2).

¹ Uzm. Dr., Başakşehir Çam ve Sakura Şehir Hastanesi Radyasyon Onkolojisi Kliniği
ilknurharmankaya@hotmail.com

² Prof. Dr., Başakşehir Çam ve Sakura Şehir Hastanesi Radyasyon Onkolojisi Kliniği
didemkaracetin@gmail.com

KAYNAKLAR

1. D'Amico AV, Whittington R, Malkowicz SB et al. Biochemical outcome after radical prostatectomy, external beam radiation therapy, or interstitial radiation therapy for clinically localized prostate cancer. *JAMA*.1998; 280: 969.
1. Schaeffer EM, Srinivas S, Adra N, et al. NCCN guidelines® insights: prostate cancer, version 1.2023. *J Natl Compr Canc Netw*. 2022;20(12):1288-1298.
2. Eastham JA, Auffenberg GB, BarocasDA, et al. Clinically localized prostate cancer: AUA/ASTRO guideline, part I ,introduction, risk assessment, staging, and risk-based management. *J Urol*.2022;208(1):10-18.
3. Mc Nevin CS, Cadoo K, Baird AM et al. Pathogenic BRCA variants as biomarkers for risk in prostate cancer. *Cancers (Basel)*. 2021; 14;13(22):5697.
4. Morgan SC, Hoffman K, Loblaw DA et al. Hypofractionated radiation therapy for localized prostate cancer. An ASTRO, ASCO, and AUA Evidence-Based Guideline. *J ClinOncol*.2018;36(34):JCO1801097.
5. Murthy V, Maitre P, Kannan S et al.Prostate-only versus whole-pelvic radiation therapy in high-risk and very high-risk prostate cancer (POP-RT) outcomes from phase III randomized controlled trial. *J ClinOncol*.2021; 39(11):1234-1242.
6. James ND, Ingleby FC, Clarke NW et al. Docetaxel for non metastatic prostate cancer: long-term survival outcomes in the stampede randomized controlled trial. *JNCI CancerSpectr*. 2022; 6(4):pkac043.
7. Kerkmeijer LGW, Groen VH, Pos FJ et al. Focal boost to the intraprostatic tumor in external beam radiotherapy for patients with localized prostate cancer: results from the flame randomized phase III trial. *J ClinOncol*.2021;39(7):787-796.
8. Klein EA, Haddad Z, Yousefi K et al. Deciphergenomic classifier measured on prostate biopsy predicts metastasis risk. *Urology*. 2016; 90:148-52.
9. Tilki D, Chen MH, Wu J et al. Adjuvant versus early salvage radiation therapy for men at high risk for recurrence following radical prostatectomy for prostate cancer and the risk of death. *J ClinOncol*. 2021; 10;39(20):2284-2293.
10. Zaorsky NG, Calais J, Fanti S et al.; Salvage therapy for prostate cancer after radical prostatectomy. *NatRevUrol*. 2021; 18(11):643-668.
11. Sood A, Keeley J, Palma-Zamora I et al. Anti-Androgen therapy overcomes the time delay in initiation of salvage radiation therapy and rescues the oncological outcomes in men with recurrent prostate cancer after radical prostatectomy: a post hoc analysis of the rtog-9601 trial data. *AnnSurgOncol*. 2022; (11):7206-7215.
12. Parker C, Sydes MR, Catton C et al. Radiotherapy and androgen deprivation in combination after local surgery (RADICALS): a new medical research council / national cancer institute of Canada phase III trial of adjuvant treatment after radical prostatectomy. *BJU Int*. 2007; 99(6):1376-1379.
13. Pearse M, Fraser-Browne C, Davis ID, et al. A phase III trial to investigate the timing of radiotherapy for prostate cancer with high-risk features: background and rationale of radiotherapy—adjuvant versus early salvage (RAVES) trial. *BJU Int*. 2014; 113(Suppl 2):7-12.
14. Parker CC, Clarke NW, Cook AD, et al. Timing of radiotherapy after radical prostatectomy (RADICALS-RT): a randomised, controlled phase 3 trial. *Lancet*. 2020; 396(10260):1413-1421.
15. Kneebone A, Fraser-Browne C, Duchesne GM et al. Adjuvant radiotherapy versus early salvage radiotherapy following radical prostatectomy (TROG 08.03/ANZUP RAVES): a randomised, controlled, phase 3, non-inferiority trial. *LancetOncol*.2020;21(10):1331-1340.
16. Feng FY, Huang HC, Spratt DE et al. Validation of a 22-gene genomic classifier in patients with recurrent prostate cancer: an ancillary study of thenrg/rtog 9601 randomized clinical

- trial. *JAMA Oncol.* 2021; 7(4):544-552.
17. Dess RT, Sun Y, Jackson WC et al. Association of presalvage radiotherapy psa levels after prostatectomy with outcomes of long-term anti androgen therapy in men with prostate cancer. *JAMA Oncol.*2020; 6(5):735-743.
 18. Pollack A, Karrison TG, Balogh AG et al. The addition of androgen deprivation therapy and pelvic lymph node treatment to prostate bed salvage radiotherapy (NRG Oncology/ RTOG 0534 SPPORT): an international, multicentre, randomised phase 3 trial. *Lancet.*2022; 399(10338):1886-1901.
 19. Tanaka N, Asakawa I, Hasegawa M, Fujimoto K. Low-dose-rate brachytherapy for prostate cancer: A 15-year experience in Japan. 2020; *Int J Urol.* 27(1):17-23.
 20. Parker C, James ND, Brawley CD et al. Systemic therapy for advanced or metastatic prostate cancer: evaluation of drug efficacy (STAMPEDE) investigators. Radiotherapy to the primary tumour for newly diagnosed, metastatic prostate cancer (STAMPEDE): a randomised controlled phase 3 trial.*Lancet.* 2018; 392:2353-2366.
 21. Burdett S, Boevé LM, Ingleby FC, et al. Prostate radiotherapy for metastatic hormone-sensitive prostate cancer: A STOPCAP systematic review and meta-analysis.*EurUrol.* 2019; 76:115-124.
 22. Phillips R, Shi WY, Deek M et al. Outcomes of observation vs stereotactic ablative radiation for oligometastatic prostate cancer: the ORIOLE phase 2 randomized clinical trial. *JAMA Oncol.*2020; 6(5):650-659.
 23. Palma DA, Olson R, Harrow S et al; Stereotactic ablative radiotherapy for the comprehensive treatment of oligometastatic cancers: long-term results of the SABR-COMET phase II randomized trial.*J ClinOncol.* 2020; 38(25):2830-2838.
 24. Kollmeier MA, Zelefsky MJ, Duma MN et al. Doz eskalasyonu ve yeni radyoterapi teknikleri. *Prostat Kanserinde Radyoterapi*, Editör:Geinitz H., Roach M III, van As N. İstanbul, Nobel Tıp Kitabevi, 2016; 95-111.
 25. Kita N, Shibamoto Y, Takemoto S, et al. Comparison of intensity-modulated radiotherapy with the 5-field technique, helical tomotherapy and volumetric modulated arc therapy for localized prostate cancer. *J RadiatRes.* 2022; 63(4): 666-674.
 26. Akyürek S Radyoterapide güncel gelişmeler. *Ankara Üniversitesi Tıp Fakültesi Mecmuası.* 2012; 65.1: 33-38.
 27. Gómez-Aparicio MA, Valero J, Caballero B et al. Extreme hypofractionation with SBRT in localized prostate cancer. *CurrOncol.* 2021; 28(4):2933-2949.
 28. Zaorsky NG, Davis BJ, Nguyen PL et al. The evolution of brachytherapy for prostate cancer. *NatRevUrol.*2017; 14(7):415-439.
 29. Li, G, Li, Y, Wang, J, et al. Guidelines for radiotherapy of prostate cancer (2020 edition). *Prec-RadiatOncol.*2021; 160-182.