

men with intermediate risk prostate cancer, and highlights that octogenarians—a notoriously under-represented group in clinical trials—may benefit the least from the addition of ADT to dose-escalated radiotherapy.

Abstract 3163 – Table 1

Hazard ratios for death in those receiving ADT + RT versus RT alone		
Age group	Hazard ratio [95% CI]	P value
60-69	0.90 [0.81 – 0.99]	0.04
70-79	0.98 [0.90 – 1.06]	0.54
≥ 80	1.13 [0.97 – 1.32]	0.12

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Apparent Diffusion Coefficient as an Early Prognostic Factor of Response to Treatment with Androgen Deprivation Therapy and Radiotherapy in Patients with Prostate Cancer

V. Duque-Santana,¹ J. Fernandez Mata,² A.A. Diaz-Gavela,³ M. Recio,² M. Peña Huertas,³ S. Sanchez,⁴ L. Guerrero,⁴ D. Sanz-Rosa,⁵ I.J. Thuissard,⁶ C. Andreu-Vázquez,⁵ F. Lopez,⁷ V. Diez Nicolas,⁸ E. del Cerro,⁹ and F. Counago¹⁰; ¹Department of Radiation Oncology, Hospital Universitario Quirónsalud Madrid and Universidad Europea de Madrid, Madrid, Spain, ²Department of Radiology, Hospital Universitario Quirónsalud Madrid, Madrid, Spain, ³Department of Radiation Oncology, Hospital Universitario Quirónsalud Madrid, Madrid, Spain, ⁴La Luz Hospital. Radiation Therapy Department, Madrid, Spain, ⁵Medicine Department, School of Biomedical Sciences, Universidad Europea, Madrid, Spain, ⁶Department of Biomedical and Health Sciences, Universidad Europea de Madrid, Madrid, Spain, ⁷Department of Radiation Oncology, Hospital Universitario Ramon y Cajal, Madrid, Spain, ⁸Department of Urology, Hospital Universitario Quirónsalud Madrid, Madrid, Spain, ⁹Quirónsalud Madrid University Hospital. Radiation Therapy Department, Madrid, Spain, ¹⁰San Francisco de Asís and La Milagrosa Hospitals. National Chair of Research. GenesisCare Spain, Madrid, Spain

Purpose/Objective(s): To analyzed the Apparent Diffusion Coefficient (ADC) as an early prognostic factor of response in patients with prostate cancer treated with radiotherapy (RT) and androgen deprivation therapy (ADT).

Materials/Methods: All prostate cancer patients classified as high or very high and unfavorable intermediate-risk according to NCCN criteria that received ADT and RT between 2008 and 2019 in whom an multiparametric magnetic resonance imaging (mpMRI) was performed were included. The ADC values were calculated by mpMRI performed 6 months after RT. We assessed the differences in the mean ADC values between patients with or without progression and/or local relapse after 10 years. Receiver-operating characteristics (ROC) analysis were used to obtain ADC cut-off values to predict 10y-progression-free survival and 10y-local progression survival in these patients. Additionally, differences in ADC values between diagnosis and post-RT were assessed.

Results: We retrospectively evaluated 98 consecutive patients, 25(25.5%) patients were intermediate-risk and 73 (74.5%) patients were high-risk. The median PSA at diagnosis was 10.15ng/ml [6.93-21]. After a mean follow-up of 95.36 months (SD:30.54), 19 (19.39%) patients progressed, 10y biochemical relapse-free survival was 76.5%, 10y-PFS was 75.6%, 10y-LRFS was 93.8%, 10y metastasis-free survival was 85.5%, 10y overall survival was 89.5%. The mean ADC values at diagnosis and post-RT was 0.81 ± 0.18 vs $1.30 \pm 0.18 \times 10^{-3}$ mm²/sec, respectively (p<0.001); and the mean relative increase in ADC values was 70.11% (SD:46.80). A statistically significant difference in post-RT ADC values was noted between patients with and without recurrence (1.20 ± 0.10 vs $1.30 \pm 0.20 \times 10^{-3}$ mm²/sec, p = 0.004). We also found significant differences in ADC values between patients with

and without local relapse (1.10 ± 0.10 vs $1.30 \pm 0.20 \times 10^{-3}$ mm²/sec, p = 0.020). The ROC analysis identified post-RT ADC cut-off point of 1.24×10^{-3} mm²/sec for progression (area under curve (AUC) 0.705, sensitivity (S) 72.2%, positive predictive value (PPV): 87.69%) and a cut-off point of 1.11×10^{-3} mm²/sec for local relapse (AUC: 0.843, S:89.4%, PPV: 98.82%). 10-y LRFS was 66.8% and 97.7% in patients with post-RT ADC values below and above 1.11×10^{-3} mm²/sec, respectively (HR:724.8 [31.28-16.793]; p<0.001). 10-y PFS was 58.6% and 85.6% in patients with post-RT ADC values below and above 1.24×10^{-3} mm²/sec (HR: 2.916 [1.113-7.644] p = 0.015). Patients whose ADC values increased >95% between diagnosis and post-RT had a lower risk of relapses (4.76% vs.26.56%, p < 0.001).

Conclusion: This is the first study with a long follow-up that shows that post-RT ADC value could be used as a prognostic factor of response in patients with prostate cancer treated with radiotherapy and ADT.

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Evaluating Guideline-Concordant Androgen Deprivation for High-Risk Prostate Cancer in a Statewide Quality Consortium

M.P. Dykstra,¹ S.N. Regan,¹ H. Yin,^{1,2} P.W. McLaughlin,^{1,3} M. Zaki,⁴ M. Mislmani,⁵ S.R. Miller II,⁶ V. Narayana,^{1,3} D. Kendrick,⁷ M. Khadija,⁸ D. Dryden,⁴ D.W. Litzenberg,¹ M. Mietzel,¹ D.K. Heimburger,⁹ M. Schipper,^{1,2} W.C. Jackson,¹ and R.T. Dess¹; ¹Department of Radiation Oncology, University of Michigan, Ann Arbor, MI, ²Department of Biostatistics, University of Michigan, Ann Arbor, MI, ³Department of Radiation Oncology, Assarian Cancer Center, Ascension Providence Hospital, Novi, MI, ⁴Covenant HealthCare, Saginaw, MI, ⁵West Michigan Cancer Center, Kalamazoo, MI, ⁶Department of Radiation Oncology, Wayne State University School of Medicine, Detroit, MI, ⁷Michigan Radiation Oncology Quality Consortium Coordinating Center, Ann Arbor, MI, ⁸University of Michigan Health West, Wyoming, MI, ⁹Munson Healthcare, Traverse City, MI

Purpose/Objective(s): Recent individual patient meta-analysis confirms the overall survival benefit of long-term androgen deprivation therapy (ADT) when added to definitive radiotherapy for men with locally advanced prostate cancer. Moreover, based on data from STAMPEDE, androgen receptor signaling inhibitors (ARSI) are recommended for select patients with multiple higher-risk features or clinically node positive (cN1) disease. Given these developments, it is important to understand ADT treatment intent in the modern era. We sought to characterize practice patterns across diverse practices within a statewide radiation oncology quality consortium.

Materials/Methods: We evaluated patients enrolled in the consortium with intact, non-metastatic, high-risk or cN1 disease. Patient, tumor, and treatment data were prospectively collected using standardized data elements. Physicians prospectively documented intent, type, and duration of ADT. The primary outcome was guideline-concordant intended ADT use of ≥18 months per NCCN. Secondary analyses included ARSI use among men meeting STAMPEDE high-risk M0/N1 criteria. Multivariable analysis (MVA) was used to determine associations with patient and facility-level factors. A mixed model with site level random intercept was used to test for facility-level variation beyond that explained by patient characteristics and to estimate ADT utilization rates for each site if that site had treated the entire cohort.

Results: Between 6/9/20 to 1/31/24, 422 men with intact high risk prostate cancer were identified across 24 centers. Most (95.3%, n = 402/422) received dose-escalated radiotherapy (EQD2 ≥74Gy (a/b = 1.5)). cT3/4 disease was present in 8.5%, and 13.7% (n = 55/422) had cN1 disease. Most men had grade group 4 (42.2%, n = 178/422) or 5 (31.5%, n = 133/422) adenocarcinoma. ADT use ≥18 months was planned for 50.9% (n = 215/422), <18 months in 34.5% (n = 146/422), and no ADT was intended for

14.4% (n = 61/422). On MVA, grade group 5 vs ≤3, PSA ≥40, ≥50% positive biopsy cores, and cN1 were significantly associated with guideline-concordant ADT. There was significant variation (p<0.001) in intended guideline-concordant ADT use by facility, with predicted probability by center ranging from 20.2% to 85.5%. STAMPEDE M0/cN1 criteria were met for 18.6% (n = 83/446) and intended ARSI use in this subset was 28.9% (n = 24/83), which increased after publication of STAMPEDE M0/N1 (n = 23/71 [32.4%] vs 1/11 [9%], p < 0.01).

Conclusion: Guideline concordant intended ADT use in a modern, multi-institutional high risk prostate cancer cohort was 50.9%. Longer ADT use was associated with higher risk tumor features but had persistent facility-level heterogeneity. Fewer than 1 in 5 met STAMPEDE high-risk M0/N1 criteria, and ARSI use among these men was <50%. Further efforts are needed to improve uptake of guideline-concordant therapies with known survival benefits.

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Prostate Cancer in Southeast Asia: An Analysis of 2022 Incidence and Mortality Data

M.A. Eala,^{1,2} E.C. Dee,³ L.E. Jacomina,⁴ K. Ng,⁵ J.M.J. Magsanoc,⁶ N.J. Magsanoc,⁷ A.V. Damico,⁸ P.L. Nguyen,⁸ M.L. Steinberg,¹ H.C. Toh,⁹ M.L.K. Chua,¹⁰ and A.U. Kishan¹; ¹Department of Radiation Oncology, University of California, Los Angeles, Los Angeles, CA, ²College of Medicine, University of the Philippines, Manila, Philippines, ³Department of Radiation Oncology, Memorial Sloan Kettering Cancer Center, New York, NY, ⁴Department of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, ⁵Department of Medical Oncology, University College London Hospitals NHS Foundation Trust, London, United Kingdom, ⁶Department of Radiation Oncology, St. Luke's Medical Center - Global City, Taguig, Philippines, ⁷Division of Urology, Department of Surgery, Philippine General Hospital, Manila, Philippines, ⁸Department of Radiation Oncology, Brigham and Women's Hospital/Dana-Farber Cancer Institute, Boston, MA, ⁹Division of Medical Oncology, National Cancer Center, Singapore, Singapore, ¹⁰Division of Radiation Oncology, National Cancer Center, Singapore, Singapore

Purpose/Objective(s): The Association of Southeast Asian Nations (ASEAN) is an economic union of 10-member states in Southeast Asia, with a population of 685 million representing over 8% of the global population. Although prostate cancer is known to be one of the most common cancers among men worldwide, a more specific epidemiologic analysis of prostate cancer in Southeast Asia is warranted, given regional heterogeneity in health systems and socio-economic landscapes.

Materials/Methods: We queried the International Agency for Research on Cancer GLOBOCAN 2022 database for the number of new prostate cancer (C61) cases and deaths by sex and age groups in ASEAN member-states. We present age-standardized incidence and mortality rates (ASIR and ASMR) for prostate cancer per 100,000 person-years, and mortality-to-incidence ratio (MIR), a crude measure of survival outcomes.

Results: In 2022, ASIR of prostate cancer was highest in Singapore (32.8 per 100,000 person-years), Philippines (24.1), and Brunei (21.4), and lowest in Lao PDR (4.1) and Myanmar (4.2). This is in comparison to the US, where ASIR was 75.2. ASMR was highest in the Philippines (10 per 100,000 person-years), Singapore (8.2), and Brunei (5.8), and lowest in Lao PDR (1.9) and Myanmar (2). In the US, ASMR was 8.1. MIR was highest in

Myanmar (0.48) and Vietnam (0.47) and lowest in Singapore (0.25) and Brunei (0.27). MIR in the US was 0.11.

Conclusion: Age-standardized incidence and mortality rates for prostate cancer varied greatly among ASEAN member-states in 2022. Incidence was markedly lower than the US, which may in part reflect lower prostate cancer screening rates in the region; however, genetic predisposition and environmental exposures likely play a role as well. Notably, the Philippines had a much higher ASIR and ASMR compared to other lower-middle income ASEAN member-states, signifying the need to bolster prostate cancer care and research in the country. Lower-middle income member-states Lao PDR and Myanmar had low ASIR but relatively higher ASMR (i.e. high MIR), suggesting poorer outcomes among those who are ultimately diagnosed. Determinants of cancer outcomes and their interplay with socio-economics must be explored, including tumor biology, lifestyle, risk factors, as well as health systems and public health interventions.

Abstract 3166 – Table 1

ASEAN Member-State	World Bank Income Level	Overall ASIR	Overall ASMR	MIR
Brunei	High	21.4	5.8	0.27
Cambodia	Lower-middle	5.2	2.4	0.46
Indonesia	Lower-middle	10.5	4.2	0.40
Lao PDR	Lower-middle	4.1	1.9	0.46
Malaysia	Upper-middle	12.9	5.7	0.44
Myanmar	Lower-middle	4.2	2.0	0.48
Philippines	Lower-middle	24.1	10.0	0.41
Singapore	High	32.8	8.2	0.25
Thailand	Upper-middle	12.5	5.5	0.44
Viet Nam	Lower-middle	11.5	5.4	0.47

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The State of Peer Review Practice in Community Radiation Oncology: Results of a National Survey of NCORP Network Sites

M. Farris,¹ R.T. Hughes,² N. Razavian,² A.C. Snively,³ C.L. Nightingale,⁴ E.G. Wood,⁴ M.D. Mix,⁵ E.C. Daugherty,⁶ E. McTyre,⁷ A. Goetz,² J.C. Farris,⁸ J. Vogel,⁸ G.J. Lesser,⁹ and K.E. Weaver¹⁰; ¹Department of Radiation Oncology, Wake Forest University School of Medicine, Winston-Salem, NC, ²Department of Radiation Oncology, Wake Forest University School of Medicine, Winston Salem, NC, ³Department of Biostatistics and Data Science, Wake Forest University School of Medicine, Winston Salem, NC, ⁴Department of Social Sciences and Health Policy, Wake Forest University School of Medicine, Winston Salem, NC, ⁵SUNY Upstate Medical University, Syracuse, NY, ⁶Department of Radiation Oncology, University of Cincinnati Cancer Center, Cincinnati, OH, ⁷Prisma Health Radiation Oncology,