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Update on PSMA PET scans: initial and salvage treatment of nodal/distant metastases in prostate cancer

Abstract:

This update explores prostate-specific membrane antigen (PSMA) positron-emission tomography (PET) and key controversies in managing nodal and distant metastases in prostate cancer. PSMA PET is increasingly favored over conventional imaging, yet treatment decisions for positive findings remain debated, particularly regarding therapeutic strategies, disease progression monitoring, and intensification approaches for metastatic castration-resistant prostate cancer (mCRPC). For nodal metastases, both metastasis-directed and systemic treatments have been explored. Total androgen blockade with gonadotropin-releasing hormone (GnRH) agonists or antagonists, combined with anti-androgens, is recommended. GnRH antagonists provide faster, more effective responses with fewer complications. Intermittent androgen deprivation therapy is generally discouraged for patients with nodal or distant metastases. Prostatectomy remains investigational for oligometastatic cases. Upon progression to castration-resistant prostate cancer, intensification strategies include radiotherapy (e.g., radium-223, lutetium-177 PSMA-targeted therapy, stereotactic body radiotherapy), chemotherapy, and immunotherapy. Lutetium-177 PSMA therapy is FDA-approved only for mCRPC patients who have failed androgen receptor pathway inhibitors (ARPI). Triplet therapy or early radiopharmaceutical administration may benefit younger, fit patients. Pembrolizumab and poly (ADP-ribose) polymerase (PARP) inhibitors are now standard-of-care for patients with germline or somatic BRCA or ATM mutations in mCRPC, though controversy remains regarding the prognostic role of tumor suppressor genes. Various approaches exist for managing nodal or distant metastases detected via PSMA PET. This talk highlights ongoing debates in radiotherapy, systemic therapies, and immunotherapy to improve outcomes in prostate cancer care.

Biography

Patricia Tai, a gold medal graduate from University of Hong Kong (ranked 35/100 globally), trained under renowned experts Prof. John Ho (nasopharyngeal cancer), Prof. David McDonald (brain tumor response: McDonald's criteria), and Mr. Jake Van Dyk (medical physics). An international skin cancer specialist, she is the author of five UpToDate chapters (Wolters Kluwer, United States). She is also the Clinical Professor of University of Saskatchewan in Western Canada. She has 148 full publications, 126 conference abstracts, and 168 presentations. With 13 academic awards, her contributions to oncology and medical research continue to benefit the field.