

Assessment and management of cognitive function in patients with prostate cancer treated with second-generation androgen receptor pathway inhibitors

Cancer-related cognitive impairment can greatly reduce patients' quality of life, functional independence, and ability to make decisions about their medical care. Patients with prostate cancer may be particularly vulnerable because of advanced age, comorbidities, and side effects from certain cancer treatments. Informed treatment selection and careful patient assessment may help reduce the occurrence or rate of cognitive decline.

In patients with prostate cancer, reducing testosterone hormone levels to treat the cancer may play a role in cognitive decline, and certain people may be at higher risk of this due to the genes they inherited from their parents. Androgen deprivation therapy, or ADT, is a common hormone therapy used to lower testosterone levels and treat prostate cancer. ADT has been associated with cognitive decline in some studies. Medications that affect the androgen receptor, or AR, lower testosterone signals that feed prostate cancer cells. These medications are commonly used to treat prostate cancer. Unfortunately, these drugs might also increase the chance of cognitive dysfunction. Not all AR-targeting drugs are created equal, however; darolutamide and abiraterone acetate may have fewer negative effects on cognitive function, which may be important for patients at high risk.

So how should healthcare providers determine who's at risk and whether a patient is experiencing cognitive dysfunction? Numerous screening and self-report tools are available for initial assessment. Patients who are identified in this initial step should be referred to neuropsychologists for further assessment. The results of the neuropsychological evaluation can help clinicians tailor their patients' care plans for the underlying condition appropriately.

Tailored care plans might include memory aids, exercise, treatment of comorbidities, and evaluation and management by a specialist in memory and cognitive change. Even when assessments have not identified that a patient is at particular risk of cognitive dysfunction, selection of drug regimens with reduced risk of cognitive impairment should be part of all

patients' care plans. Such strategies can help maximize patients' quality of life and functional independence.

Importantly, the precise cause of cognitive dysfunction in prostate cancer remains unclear, and findings regarding drug-related impairment have been inconsistent. Furthermore, there is no consensus protocol for how to best screen and assess patients for cognitive decline. Nevertheless, given the plethora of tools available, assessment-based personalization of care is an important approach for preventing and managing cognitive dysfunction in patients with prostate cancer.