HOPA 2018: Abiraterone Adequately Suppresses Testosterone Without Androgen Deprivation Therapy in Castration-Resistant Prostate Cancer

But whether androgen deprivation therapy has other antitumor effects remains unclear

PracticeUpdate Editorial Team

Jeff Engle, PharmD

March 22, 2018—Denver, Colorado—Men with castration-resistant prostate cancer have adequate testosterone suppression with abiraterone, whether or not they also receive androgen-deprivation therapy, according to a poster presented at the 14th annual conference of the Hematology/Oncology Pharmacy Association, taking place here from March 21 – 24.

“Androgen deprivation therapy is the gold standard treatment for patients with metastatic prostate cancer,” presenter Jeff Engle, PharmD, from the University of Minnesota Medical Center in Fairview told *Elsevier’s PracticeUpdate*. “Upon disease progression on [this therapy], the patient is considered to have castration-resistant prostate cancer, and other treatment options are warranted. Ongoing use of androgen deprivation therapy is recommended when adding other agents, in order to maintain testosterone levels below 50 ng/dL.”

Androgen deprivation therapy, however, has problematic side effects, such as hot flashes, fatigue, and metabolic syndrome, he explained. Meanwhile the National Comprehensive Cancer Network recommends abiraterone for patients with castration-sensitive and -resistant prostate cancer. This agent works downstream from androgen deprivation therapy, by blocking CYP17, “an essential enzyme in the androgen biosynthesis pathway,” Dr. Engle explained.

“An oncologist at the University of Minnesota will place patients on abiraterone at the time of castration resistance and subsequently remove the androgen deprivation therapy and serially monitor testosterone concentrations to ensure patients are maintained below castration levels,” he said. “We undertook this study to determine if abiraterone alone was sufficient to adequately suppress testosterone production compared to abiraterone + androgen deprivation therapy.”

The investigators conducted a single-center, retrospective cohort study of 57 men with castration-resistant metastatic prostate cancer treated at the University of Minnesota Medical Center between January 1, 2012 and August 1, 2017. Of these patients, 10 (17%) were treated with abiraterone alone, 36 (64%) were treated with abiraterone + androgen deprivation therapy, and 11 (19%) were treated with abiraterone + androgen deprivation therapy, followed by abiraterone alone.

In the 84 measurements taken among the men who received abiraterone alone, median serum testosterone level was 1.9 ng/dL, compared with 0.5 ng/dL for the 115 measurements taken in men on combination therapy (P = .14). For men who started on combination therapy and then transitioned to abiraterone alone, median serum testosterone levels increased from 0.61 to 4.83 ng/dL (P = .07). All of these values were well below the target of 50 ng/dL. In fact, serum testosterone only increased beyond this threshold in 1 patient, and he had documented non-adherence to chemotherapy.

“There was no difference in the serum testosterone concentrations between patients treated with abiraterone vs those treated with abiraterone + androgen deprivation therapy,” said Dr. Engle. “We also compared progression-free survival and found no difference between the 2 groups. If all patients in the study were treated with abiraterone alone, we estimated a cost avoidance of over $1.25 million based on average wholesale price of leuprolide.”

Still, this is a small, retrospective, single-center study that requires confirmation, said Dr. Engle. In addition, he noted, it is unclear whether androgen deprivation therapy has antitumor activity beyond testosterone suppression. An ongoing randomized, prospective trial known as SPARE, which is comparing clinical outcomes between treatment with abiraterone and combination abiraterone + androgen deprivation therapy, will help answer this question.