

The Will Rogers Phenomenon and PSMA PET/CT

TO THE EDITOR: Soon after initiating ^{18}F -PSMA imaging, our team realized that we were able to detect and stage prostate cancer with far greater sensitivity than former imaging technologies allowed. One of our early cases involved identification of disease we had difficulty characterizing because the low-dose CT scan and standard PET reconstructions were unable to fully resolve the abnormalities. We therefore increased the CT scanner tube potential to 120 reference mAs (CareDose 4D; Siemens) and applied the higher-resolution option (HiRez; Siemens) on the PET scanner to a 400×400 matrix with increased imaging time in the abdomen and pelvis. Now, clear identification of positive 3-mm lymph nodes is a routine event.

We recently saw a clearly positive PSMA PET scan within pelvic lymph nodes smaller than 3 mm in a patient after radical prostatectomy with a prostate-specific antigen rise from 0.02 to 0.09 ng/mL. This use has truly unleashed the capabilities of high-resolution PET/CT and the promise of this technology.

How is patient care impacted? For the first time, I have heard my colleagues refer to this as the “classic Will Rogers phenomenon,” a term often used to describe stage migration. Will Rogers, a renowned vaudeville cowboy whose career peaked in the 1930s, is purported to have said, “When the Okies left Oklahoma and moved to California, they raised the average intelligence level in both states.” Stage migration occurs when disease is reclassified

either by changes in technology or by changes in staging algorithms. In the end, survival in the healthier patient group improves, as the least healthy patients have been eliminated from the group by upstaging of their disease. The less healthy group also has better survival, as the patients can enter the group at an earlier time in their disease process.

Stage migration is not unfamiliar to the nuclear medicine community, who witnessed the changes in delivery of care for thyroid cancer. Although the death rate from thyroid cancer is stable, there was a marked increase in disease detection. As a consequence, treatment algorithms were modified.

However, the similarity to thyroid cancer is only superficial at best. Prostate cancer has far greater complexity in treatment options, and guidelines are based on large-scale prospective clinical trials. It will take years to incorporate the effects of stage migration through modification of treatment options. I hope that these issues are addressed for all men in their 60s and 70s, as we may find the baby boomer generation reclassified as the chemically castrate generation.

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