DR. METZGER'S SATURDAY EVENING NEWSLETTER
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PROSTATE FORUM OF ORANGE COUNTY
HTTPS://WWW.PROSTATEFORUM.ORG/

Some PSMA-PET scan basics with a link to a 14-part video discussion by top medical professionals.

Good Saturday evening!

To cure any cancer the treatment team must find lesions and find all of them. The sooner lesions are found and treated the better the chances of reducing it's spread and the destruction of healthy tissues. That's harder than it sounds. Multi-parametric Magnetic Resonance Imaging is a valuable tool for detecting many cancers and non-cancerous diseases. It's not perfect. Detection and staging of cancers are further aided using radiopharmaceuticals that contrast liaisons thus making them available for treatment. I'm talking about a detection process called a Prostate Specific Membrane Agent Positron Emission Tomography. It's something Ira and I talk about nearly every meeting for our visitors who have high Gleason scores, high prostate stimulating antigen labs or who may be experiencing biochemical recurrence. We urge them to discuss getting a PSMA-PET scan to find out where their "Mets" are thus opening the door to various treatments either individually or combined.

How does PSMA-PET work? A mildly radioactive contrast is injected into a patient. That contrasting agent seeks out the PSMA protein given off by prostate cancer cells and binds with it. The administration of contrast happens with the patient resting in a tomography machine that will make various features of their insides visible by contrasting those features with positron emissions. This machine scans the patient's entire body. Two different radioactive contracts are used for prostate cancer. Gallium-68 and Fluorine-11. These two drugs need to be made in special labs close to the time when they will be used by the radiologist. Right after they are made, they throw off their positive charges. That's what makes them radioactive. But, as they throw off their charges two things happen. First, they run out of charges. Thus, they won't be of help as a contrasting agent seeking out prostate cancer lesions. And, by throwing out their positive charges, they become a different element. Florine 11 has a "half-life" of 110 minutes before it's of no use. Gallium 68 has a 68-minute half-life.

The costs of a PSMA-PET scan to the patient varies widely depending on where you live, which hospital does the scan and the percentage of cost your health insurance picks up.

Why are their two different contrast agents? First, F11 is a more recent development with a longer "hang time" than G68. F11 produces more positrons so it may do a better job of detecting Mets. But there are instances where Mets' have been found in patients who have had G68 that were not found with F11. And some prostate cancers that do not secrete PSMA are not contrasted by either product.
So, there's fallibility for MP-MRI and PSMA-PET but combining the two methods increases detection ability overall. Results are produced by machines but need human interpretation. So, you want your MP-MRI interpreted by a radiologist who is experienced with detecting prostate cancer. Your PSMA-PET needs to be read by a radiologist who can distinguish prostate cancer lesions from normal anatomy or even other diseases such as sarcoidosis. Here's a situation where PSMA-PET interpretation might be enhanced by artificial intelligence in the future.

I've shared this information to prepare you for an interesting 14 part **Urology Times** video conference with top medical professionals who discuss their views and professional experiences here**:**

https://www.urologytimes.com/peer-exchange/advances-in-imaging-for-prostate-cancer-the-role-for-psma-pet-imaging.

It's a fast-moving informative discussion and you will learn from and be sure to listen to the observations of medical doctor Tony Abraham in episodes 12, 13 and 14.

Enjoy the discussion and I look forward to listening to your experiences with PSMA-PET scans in our information and support groups on the 2nd and 4th Tuesday evening of each month at 5:00 p.m. Pacific on zoom. Check out our website for more information about the meetings.

Warmly,

CKM