Transcript Details
This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/project-oncology/highlighting-the-current-status-and-future-of-theranostics/24497/

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Highlighting the Current Status and Future of Theranostics

Announcer Intro
Welcome to *Project Oncology* on ReachMD. On this episode, we'll learn about the current status and future directions of theranostics with Dr. Geoffrey Johnson who's a Nuclear Medicine Specialist and Radiologist at the Mayo Clinic in Rochester, Minnesota. Let's hear from him now.

Dr. Johnson:
So I think theranostics is dramatically growing in investment, 80+ companies that have started in the last five years that are investing and, and bringing forth inventions into clinical trials, and it's exploding. In our practice radiopharmaceutical therapy as a category already exceeds the number of patients we treat with CAR T therapy. So it is here now. It is not emerging. It's here. But when you look at the pipeline of drugs and all the different cancer targets we're going after in all these trials, it has the potential to dramatically explode, in part because we can see where the drugs are going, and, therefore, if we design them really well and iterate and keep imaging them, we can design them to be really low toxicity. And that's been really the most exciting part of this therapy when you're dealing with the patients from my point of view. The technology is really cool. You can see them. It's all beautiful. But the low side effect profile is what makes the patients come out of the woodwork to come and get these therapies.

So what we're all hoping for is that we're going to take these therapies earlier and earlier and earlier to treat patients right as soon as they go metastatic or even before surgery to try to really affect their therapy and maybe get them to avoid having to take toxic or really high side effect therapies—or put them in combinations because, basically, any combination of therapy with radiopharmaceutical therapy in theory could be synergistic and beneficial. Just hope the side effects aren't bad. You need to do the study to find out.

The other thing that's very exciting in this field is because we can see where they're going, we're making better and better versions of these, and there's a whole new wave of them with alpha-emitting therapies. The ones we currently have are mostly beta-emitting therapies. Alpha-emitting therapies are harder to make, more expensive, but also more precise and more powerful and really brings us to the potential to kill really tiny tumors and have a more significant, faster, efficacious, approach to any cancer. There's really no cancer we can't go after with the right ligand.

So all of those things combined opens just a tremendous amount of opportunity for development and a lot of work. And hopefully, the supply chains, which are a key issue, especially as we go into new radiopharmaceuticals has continued to be an issue because they're short-lived, so any bump in the supply chain means the medicine you had for your patient isn't getting to your patient.

Announcer Close

That was Dr. Geoffrey Johnson speaking abouton the landscape of theranostics. To access this and other episodes in this series, visit *Project Oncology* on ReachMD dot com, where you Be Part of the Knowledge. Thanks for listening.