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ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

To Implant or to Inject?

Announcer:
Welcome to CE on ReachMD. This activity is provided by Evolve Medical Education and is part of our MinuteCE curriculum.

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Dr. Talcott:
This is CE on ReachMD and I'm Dr. Katherine Talcott. Here with me today is Dr. Roger Goldberg. Today we're discussing tyrosine kinase inhibitors under investigation for the treatment of exudative retinal problems.

In addition to these mechanistic differences that we discussed in another episode, sustained release technology also sets TKIs apart. Dr. Goldberg, could you give us an overview of the novel delivery platforms that help differentiate TKIs from other sustained-release retinal therapies?

Dr. Goldberg:
Sure. And I think the key thing to remember here is that TKIs, tyrosine kinase inhibitors, these are small molecules, and so if you were to just inject them into the eye, they would dissipate very quickly. And so in order to have a sustained effect, they need to be delivered in a way that allows the drug to be released slowly over time. And so you mentioned OTX-TKI. That's a sustained-release axitinib that's loaded in a bioresorbable hydrogel. The company that makes this product calls this the ELUTYX technology, and it's a proprietary bioresorbable polymer matrix in a hydrogel. And it's actually FDA-approved in another formulation, intracanalicular dexamethasone, that's already approved for inflammation after eye surgery. And what they've done here is they take that same technology and they marry it together with the axitinib to get the OTX-TKI and allow sustained release anywhere from 6 to 12 months and is administered through a 25-gauge needle.

EYP-1901, that combines the TKI called vorolanib with what the manufacturer calls a bio-erodible Durasert-E, the E for erodible, technology. And again, they have an FDA-approved history with a non-bioerodible version of this technology loaded with fluocinolone that's approved for DME and for posterior uveitis.

And then in the earlier clinical trials, they made it into a bioerodible version of this technology, and they've actually continued to improve that so that the current product that's being developed in phase 3 is 94% drug. It has no PEG or PLGA, and it has therefore a much higher payload. And it has certain release characteristics that give a little burst initially, and then the sustained release out to 6 months or longer.

And then you had mentioned as well the Clearside axitinib version, which is a suprachoroidal. And what they're doing is they're taking axitinib and they're using the suprachoroidal space to create the reservoir and slow release of axitinib to try to control exudative disease, AMD and DME, over time by releasing it through the suprachoroidal space. And in their study, patients were dosed anywhere from every 12 weeks out to 24 weeks.

Dr. Talcott:
Awesome. That's a great summary. It's really interesting. We talked in an earlier episode about how really tyrosine kinase inhibitors really take advantage of sort of different mechanism of actions than some of the other normal medicines in our toolbox. But it's really interesting how much development actually went into how to be able to have these small molecules stay in the eye for a longer period of time. And I think there's a lot of technology there that we really haven't seen quite as much in the retina space, though you did mention some examples that some of these companies have taken advantage of things that have been used before.

But I think it's really interesting that these technologies, except for the Clearside one, really offer the availability to be able to give these medicines as an injection into the eye, which I think makes for a lot more ease to be able to deliver this technology to patients. So again, also very attractive in that something can be given in the office as opposed to needing to go to the OR in order to be able to deliver this technology.

Dr. Goldberg:
For sure. And there's a suprachoroidal triamcinolone that's already FDA-approved. Unfortunately, the suprachoroidal axitinib, the suprachoroidal TKI, doesn't look like the development's going to continue there past phase 2.But these other two intravitreal delivered platforms are moving forward and we should have top line results here in 2026.

Dr. Talcott:
Awesome. Well, this has been a great conversation. Our time is up. Thank you for listening.

Dr. Goldberg:
Thanks for having me.

Announcer:
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