

Getting to know Banu Sankaran, an Alexion R&D Leading Voice

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Diagnostics and artificial intelligence (AI) systems are transforming research and development (R&D) in the healthcare industry. The potential impact is considerable for rare diseases, which are not well understood and often involve a long diagnosis journey for patients. We spoke to Banu Sankaran, Head of Diagnostics Strategy & Development, about the rare disease diagnostic landscape and her team's goal to develop innovative solutions for patients.

What is the role of the diagnostics and strategy team at Alexion?

Rare disease patients often face a long and difficult path to diagnosis, a journey we refer to as a "diagnostic odyssey." On average, rare disease patients see more than seven providers before receiving the right diagnosis and treatment, an odyssey that can take more than four years. So, our ambition is to mitigate this by developing innovative solutions with the potential to help patients and caregivers get to the right diagnosis faster and to help them get the right treatment sooner.

We begin with patient and caregiver insights to help us understand the patient journey to diagnosis and treatment, and where along that path there may be an opportunity for improvement. Is there a diagnostic test that might help inform physicians' treatment decisions or identify the patients who may benefit from a new clinical trial? Could AI-based software improve the speed and accuracy of diagnosis? We look for those spaces where diagnostics may make an impact.

What led you to a career in diagnostics?

I started my career journey as a principal scientist working in the field of in-vitro diagnostics. Over time, as the field of precision medicine and targeted therapies evolved, my career became dedicated to supporting the partnership between diagnostics and pharma. The interface between these two entities is what ultimately got me interested in the idea of developing companion diagnostics to help pair targeted therapies with the patients who may be most likely to benefit. Initially, my work was focused in oncology but over time expanded into non-oncology areas, as well.

How did you come to work in rare disease at Alexion?

What caught my attention was the opportunity to have a profound impact on people's lives, given the great need for diagnostic tools for rare diseases, which is continuing to increase. As we continue to follow the science and identify new targeted treatments, the opportunity for diagnostics will continue to grow. I was impressed by Alexion's portfolio and continued momentum in critical areas of development for rare diseases, such as genomic medicine.

Precision medicine approaches have transformed the treatment landscape including for many cancers. It's safe to say that this targeted approach will continue to expand in other areas, especially as genomic medicine approaches continue to mature. Diagnostics are poised to play a considerable role in this because it can help to identify the right treatment for the right patient at the right time. This is really the core of what we are trying to achieve, and I'm proud of the diagnostics capabilities that we are building. We have many parallel projects underway with the aim to be the pioneers moving the field forward and leading this transformation.

What's one thing you've learned from working in rare disease R&D?

Since I began working in the rare disease space, I've gained a greater awareness of the health equity challenges that this community faces, and the role diagnostics can play to improve care for rare disease patients. Many people already face obstacles to accessing specialists and technologies needed to

diagnose certain diseases and this can be exacerbated for those impacted by a rare disease. By making diagnostic tools more accessible, we can help overcome these barriers, and help to ensure that everyone is able to have the same access to healthcare, diagnostic tests and treatment.

In addition to existing diagnostic tools, technologies like AI are transforming the healthcare industry. AI-powered software and tools may help to identify patterns in disease progression and ultimately help patients receive a diagnosis and treatment faster. These advanced systems will also make it easier for physicians across the globe to share learnings, which may help to improve health outcomes for more people.

Do you have any advice for someone considering a career in rare disease R&D?

Rare disease R&D can be challenging and there's often a level of uncertainty to our work. As such, many people who embark on this career are strong, independent thinkers. This is a great attribute, but none of us can do our jobs alone.

I frequently engage colleagues across different parts of our organization and find their expertise and insights help my teams deliver stronger results. To me, some of the most important qualities are collaboration, communication and inclusiveness. To overcome the challenges inherent in rare disease and affect the greatest change, we must work collaboratively and be open to other points of view. We are most impactful when we all come together.

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