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AN AUDIENCE WITH…

Thomas Lynch

Bristol-Myers Squibb

Bristol-Myers Squibb has one of the deepest immuno-oncology drug pipelines, with checkpoint inhibitors, T cell and natural killer cell agonists, and metabolic modulators of the tumour microenvironment. Despite a setback with its marketed checkpoint inhibitor nivolumab in a first-line lung cancer setting last year, there are still high hopes for these emerging therapies. In March, the company hired Thomas Lynch — former CEO of Massachusetts General Physicians Organization and Director of the Yale Cancer Center — as its new Chief Scientific Officer, tasked with overseeing the progress of this pipeline. He told **Asher Mullard** about his R&D priorities, the promise of genomic-based diagnostics and the need for faster development of novel cancer drugs in earlier stages of disease.

What are your R&D priorities?

Bristol-Myers Squibb (BMS) needs to continue to discover and develop drugs that are transformative, that make a huge difference in the lives of patients. As CEO of the Massachusetts General Physicians Organization, I was very involved in the relationship between providers and payers and I really saw how much emphasis is placed on the value proposition of treatments now. What gets me incredibly excited is the depth and scope of the pipeline that we have at BMS in both cancer and non-cancer areas. We have more than 70 programmes that we are working on, and around 45 potential agents in development right now. My first priority is emphasizing the concept of value and the focus on transformative medicines.

Given that we've got so many assets, my second priority is determining how to do rational drug development at this point in time. We know we can't combine every one of these drugs with each other. How do we use innovative trial design models, analytics and data to help us come up with optimal treatments and combinations?

Late last year BMS also announced plans to reorganize its R&D division. How does this fit into your overall plan?

If you think of the broad evolution of BMS, at one point we had close to 65,000 employees and we made everything from hair spray to baby formula. But drug development rewards companies that have focus, and those companies are able to bring products to market quickly. You've already seen BMS transform into a very focused biopharma organization, and the aim with this restructuring is to really define what we do very clearly, and reorganize our R&D effort to make it as efficient, nimble and responsive as possible.

We also want to try to reduce some of the inertia that you find in a very large company, and foster the spirit and attitude of a biotech.

But you will still focus on your other areas of interest: cardiovascular disease, fibrotic disease, immunoscience and genetically defined diseases (CFIG)?

We are a cancer company, but we aren't just a cancer company. And we think CFIG is a great area of focus.

One of the reasons I'm excited about CFIG is that the other side of the coin of immuno-oncology is the ability to inhibit the immune system. As we learn how to stimulate the immune system with immuno-oncology therapies, we can also learn how to inhibit it. And we've already seen this, with, for example, some potential opportunities in diseases like lupus.

You've advocated for better genomics and diagnostic technologies in cancer drug development, and BMS recently signed deals with liquid biopsy start-up Grail and the genomics firm Foundation Medicine. Do you see these deals as primarily about development and trial-design decisions? Or do you expect them to inform discovery as well?

They will contribute to both.

I remember a lung cancer patient we were taking care of at Yale, where we sent a tumour biopsy out for whole-exome sequencing. The results came back and there were about 400 mutations. Now, our team could probably understand what 20 of those mutations were. We had no idea what significance the other 380 had. Analyses of mutational patterns will yield important insights for drug discovery programmes.

You've also advocated for the faster development of novel drugs in earlier stages of cancer. What are the biggest hurdles to these trials?

The biggest hurdle here is the reality that those trials take longer to run. Pharmaceutical companies need to get drugs to patients as quickly as they can, and so often choose advanced disease as the place to demonstrate activity. People with early disease also still have very high cure rates, so you have to be careful about how you try new drugs in these populations. But the advantage of testing drugs in early-stage disease is that that you can really impact cure rates. In melanoma, for example, the use of a drug such as ipilimumab as an adjuvant therapy has increased the overall survival of patients.

I have great hope that immuno-oncology will be able to do the same thing for lung cancer, renal cell cancer and maybe even head and neck cancer. Obviously we have to carry out those trials to know for sure, and we are doing them at BMS.

There is a lot of speculation that activist investors including Carl Icahn see BMS as an ideal merger and acquisition target. What does this mean for your team?

My focus really is on the R&D side. From my perspective, I think we'll be in great shape if we develop spectacular medicines that make a difference for patients. I really couldn't guess about what impact any one investor could have.