

**Module title: Oncology Market Trends****Section I: Video**

Video text

The big question is: will we ever get a cure for cancer?

I think that's a very difficult question to answer. If I had to, I'd have to say, "No. We won't get a cure for cancer." Cancer's not one indication; it's obviously an umbrella term for more than 250 separate patient populations. Indeed, that number of patient populations is increasing on a regular basis as we are identifying new biomarkers, which can carve out new discrete patient groups.

So there's not going to be one magic silver bullet which is going to cure cancer. And even if there were, "cure" is a very difficult word to use in oncology. Not only is it an emotive topic, but "cure" suggests that every single cancer cell or clone has been completely eradicated. It is very difficult to prove, especially in late stage metastatic disease.

Instead, what I think we'll see is a trend from acute disease to chronic disease. We've seen that already happen in some hematological malignancies. We will go forward from very short life expectancies to gradually longer and longer. This will mean that some patients are on treatment for a very long period of time. Therefore new issues in oncology become more relevant, issues such as patient compliance and persistency to medication. Of course, related to that, is tolerability.

Hello. My name is Andrew Merron. I'm the Executive Director of the Oncology Team here at Decision Resources Group.

**Section II: Oncology landscape: High unmet need**

There is still a high unmet need of cancer treatment today. There will be 1.7 million new cases of cancer diagnosed in the U.S. this year. This corresponds to nearly 600,000 deaths this year alone in the United States, meaning that cancer is the second most common cause of death, only behind heart disease. Clearly there's a big unmet need here to improve care. Not only for pharmaceutical companies to make money, but also clearly for societal benefit.

We have made enormous strides in cancer care, but there's still a lot more to be done.

Nevertheless, we shouldn't lose heart. Since the 1970s, there has been nearly a 50% increase in the five-year relative survival of cancer from diagnosis through to five years. This improvement is a result of increased developments in surgical practices, better diagnosis. But importantly, of course, better treatments.

Some of the large indications are associated with high commercial outcome. For example, breast cancer is associated with a \$14b revenue in 2017 in the United States and the rest of the G6.

Other indications are also associated with a very high revenue. For example, multiple myeloma: approximately \$13b.

Companies really clearly want to make an impact in this incredibly commercially lucrative space. The total oncology market is approximately \$140b, and gaining even a small slice of that will result in significant sales if the pharmaceutical company can show that it has developed an efficacious drug with an appropriate standard of care as a comparator arm, and the drug is tolerated and conveniently delivered. Of course, that's what pharma's currently focused on: new therapies and developing new opportunities for patients.

### **Section III Key Dynamics in the Oncology Market**

Theme 1: Dominance of immunotherapy

So that brings us neatly to an assessment of where are we today in oncology?

The first thing I'd like to mention is the importance of immunotherapies. Clearly, everyone talks about immunotherapies in oncology: there's no escaping the importance of immunotherapies. But I wanted to mention: the data at ASCO really focused on the importance of immunotherapies in combination with other drug classes, and immunotherapies in combination with other immunotherapies. That's really where the future is. It is important that pharmaceutical companies understand what is the optimal combination to use for an immunotherapy agent.

Immune checkpoint inhibitors are not without flaws. That's why we need these combinations to improve the overall efficacy, and to make them applicable for indications where they are not currently suitable as monotherapies.

When we're thinking about immunotherapies, it's not just checkpoint inhibitors, of course. The other really exciting class are CAR T-cell therapies. At the moment, there are two approved CAR T-cell therapies that have made great efficacy improvements in select hematological malignancies.

But I think the real excitement for CAR T will come in the future, at least hopefully. Once we can generate CAR T cells for novel targets on solid tumors – that's when they'll really start to come into their own; and that's where, clearly, most commercial opportunity lies.