New dynamics in the pharmaceutical oncology market

Five questions to shape your strategy

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Introduction

Amid projected growth, the pharmaceutical oncology market is undergoing significant change. Medical advances continue to extend survival rates and improve patient quality of life; they also are upending traditional models for treatment, pricing and patient engagement around the world. Pharmaceutical and life sciences companies competing in an increasingly crowded oncology space will need to capitalise on new technologies, relationships and value expectations if they hope to maximise benefits for patients — and for all stakeholders. Pharma companies active in oncology are now in a race to harness new data sources and digital platforms so they can engage patients, providers and regulators more effectively. With the debate over drug costs continuing, companies will have to prove their value in an evolving landscape that demands transparency.

A growing market

The oncology market is significant and compelling for both human and business reasons. Simple projections of demand, as measured by prevalence across tumor types, suggest there will be approximately 18m patients in the US alone by 2020, a 31% increase from 13.8m in 2010.[1] Global spending on therapeutic and supportive care for cancer is expected to rise from US$133bn in 2017 to as much as $200bn in 2022, at which point it will account for roughly 14% of total global medical expenditure.[2] The current pharmaceuticals pipeline is disproportionately focused on cancer. Of the 15,267 assets across all phases of development, about 34% are oncolytics, up from 30% in 2013.[3] The growth in the industry has the potential to have a positive impact on the quality of life of millions of patients.

But these projections may not result in windfalls for current participants. The market will grow, to be sure, but not nearly as fast as these top-down analyses suggest. In fact, there are several factors that we believe will significantly constrain growth and that could inhibit the ability to improve patient outcomes at scale. An overburdened care delivery system is not primed to accommodate the expected growth in oncology. Declining access to prescribers together with tighter formulary-driven control will reduce aggregate demand as utilization management tools are used more widely. At the same time, consolidation among payers, providers, pharmacy benefit managers and specialty pharmacies will add to price and margin compression. Even the components of innovation themselves, especially the advent of biomarker-driven population stratification, have the potential to reduce the number of addressable patients.

Building a durable strategy in oncology

In order to ensure that they share in the growth that does materialise and contribute to the search for cures and meaningful treatments, companies in the pharmaceutical oncology sector will have to think strategically in several dimensions. As in all therapeutic markets, oncology companies must invest simultaneously in capabilities that match the market's natural evolution — what we call 'table stakes' investments — and in capabilities that clearly differentiate a firm relative to its peers. Given the size of the canvas, and the forces that are transforming the environment, it can be challenging to know where to begin. We believe that answering the following five questions will help companies focus their efforts amid a dynamic environment.

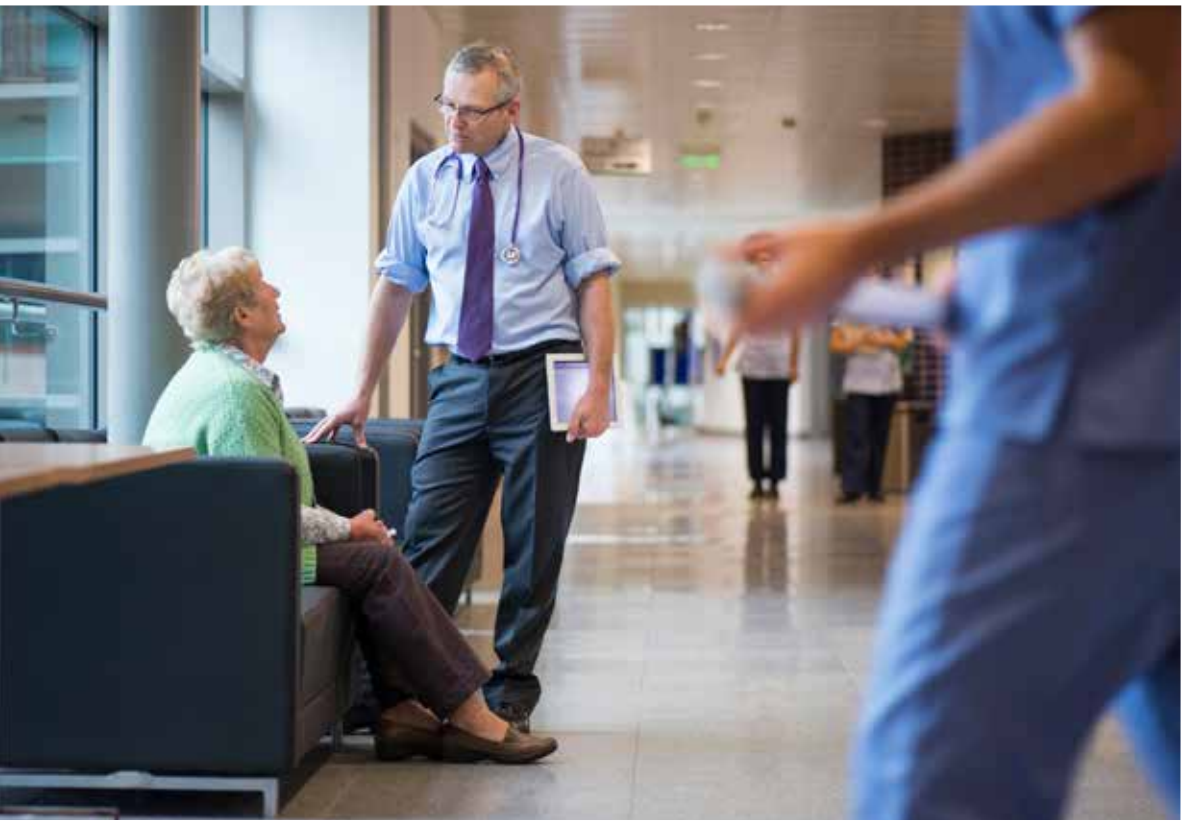
1 Mariotto, A.B., Yabroff, K.R., Shao, Y., et al., 2011. *Projections of the cost of cancer care in the United States: 2010–2020*, Journal of the National Cancer Institute.

2 IQVIA, 2018. *Global oncology trends 2018*; IQVIA, 2018. *2018 and beyond: Outlook and turning points*.

3 Pharmaprojects, 2018. *Pharma R&D Annual Review 2018*.

1

How do I harness new sources of data and insight to power my clinical research and improve patient outcomes?



As massive data sets become more interoperable and AI plays a larger role, researchers will be able to follow patients longitudinally and obtain true clinical outcomes.

Pharma companies must develop the capabilities to respond to powerful emerging data sources, manage them with the help of artificial intelligence, and establish the partnerships necessary to do so. Beyond the business opportunities, the human impact can't be understated, as synthesizing the data to discover new therapies — and even cures — could affect the lives of the millions suffering from cancer across the globe.

Although more data is being collected every day, and companies are experimenting with how to use it, pharma has yet to seize the full potential of data-driven medicine. The problem is not limited to pharma. Providers must become more constructive partners when it comes to the management of data, and regulators must adopt a more agile stance to the rapidly changing technologies and business and professional arrangements surrounding data. The excitement around big data is tempered by the challenges in transforming data culled from electronic health records, clinical trials and patient wearables into actionable information. Clinical data is not always structured in ways that make it easy to extract the insights researchers need, or to merge the data with other data sets. It also can be imprecise, as healthcare workers can easily miss clicking a box, which can impede efforts to draw meaningful analysis. Even a patient's cancer stage can be a subjective assessment as reported in electronic health records, hindering attempts to create reliable data sets from this basic information. And all parties should strive to ensure that access to data is granted to organizations performing R&D.

As a result, pharma needs to be pushing toward data sets that are active, not static. Data needs to live beyond its initial use, and become iterative, fed back into systems with new sources, including non-trial patient data. As massive data sets become more interoperable and AI plays a larger role, researchers will be able to follow patients longitudinally and obtain true clinical outcomes. Companies must decide who within their organization is in charge of advancing analytics capabilities.

Forming partnerships can be key to solving the data access and analytics conundrum (see '2018: Pharma's big data deals,' next page). But many companies do not have a comprehensive, cohesive strategy for such deals. They must decide whether it is better to target academic medical centres that already have collaborations with community networks to access larger patient-level data sets, or to focus on patient advocacy groups that likely will be wooed by many firms. And how do companies bring value to these relationships? Some pharma companies have started to build direct relationships with healthcare systems to gain insight from patient data that will benefit both entities, such as that between Geisinger Health System in Pennsylvania and New York–based Regeneron Pharmaceuticals. Under the partnership, Geisinger shares DNA samples and de-identified electronic health records of consenting patients; the Regeneron Genetics Center sequences the genetic material, which is paired with the patient's real-world health data to create a comprehensive database that both partners hope to use to speed drug development and improve patient outcomes.[4] Pharmaceutical firms that don't have full data analytics capabilities may seek out partnerships with technology companies that are diving into the healthcare space.

Pharma companies will need to determine the best relationship roadmap for their products, as those players that can properly analyze available data can better identify patients who can benefit from a particular therapy, while developing more informed value stories and engagement strategies.

4 Geisinger, The DiscovEHR collaboration with the Regeneron Genetics Center.

2018: Pharma's big data deals

Major deals announced recently between pharma and tech firms underscore the potential that exists in unleashing data. Companies are rushing to obtain real-world evidence (RWE) to accelerate research and inform their commercial agenda.

Roche/Flatiron – In the first half of 2018, Roche took steps to fortify its data infrastructure. It acquired Flatiron Health, a New York firm that specialises in oncology-specific electronic health record software and the development of real-world evidence for cancer research. Roche also purchased the remainder of Foundation Medicine for its genomic profiling testing and data services, hoping to further enhance its personalised medicine strategy.

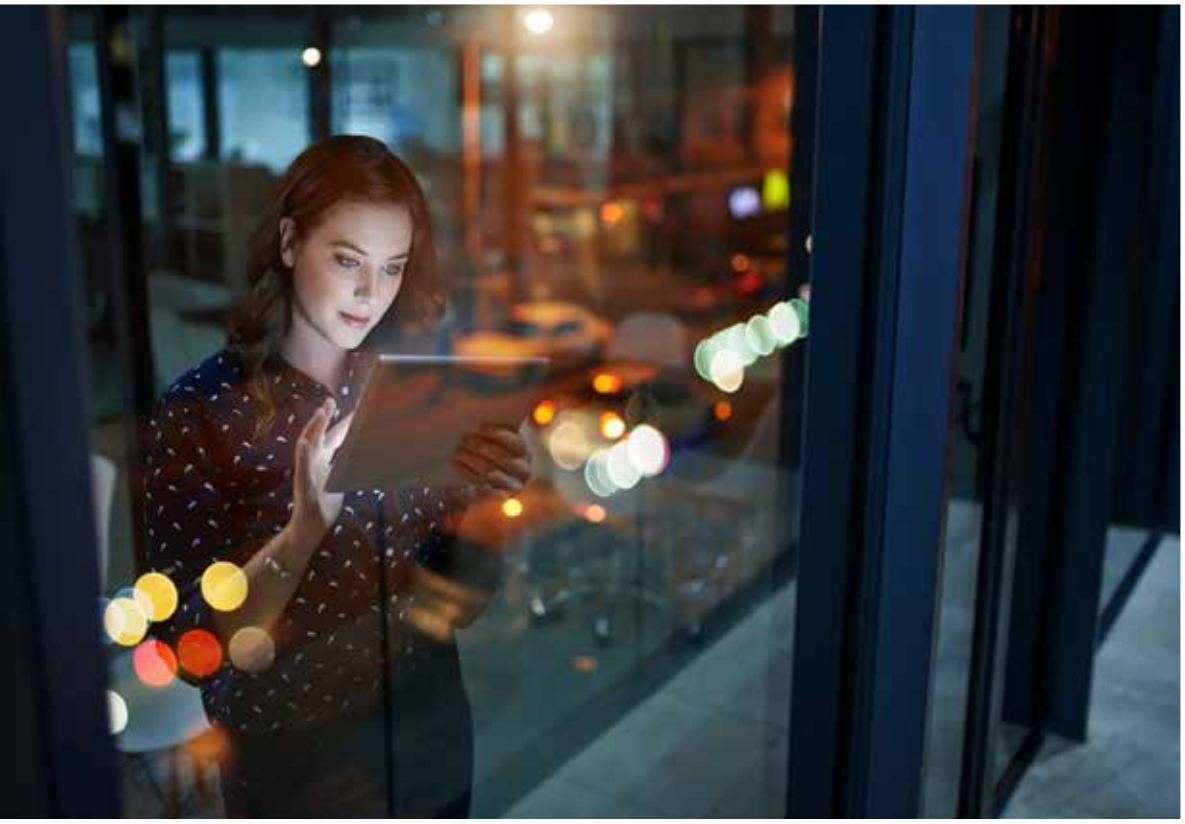
Bristol-Myers Squibb/Flatiron – In May 2018, BMS also announced a deal with Flatiron Health, under which it will use the firm's data to fast-track its own research and development efforts. Doing so can improve BMS's in-house capability to generate evidence and insight about its cancer drugs outside of clinical trials.

Sources: Roche, 2018. *Roche to acquire Flatiron Health to accelerate industry-wide development*; Roche, 2018. *Roche and Foundation Medicine reach definitive merger agreement*; Bristol-Myers Squibb, 2018. *Bristol-Myers Squibb and Flatiron Health Expand collaboration with a three-year agreement*.

> Companies are rushing to obtain real-world evidence to accelerate research and inform their commercial agenda.

2

How can I use digital platforms to create new relationships, conversations and interactions with my customers?



How one pharma company rethought digital engagement

Although many pharma companies target digital engagement programmes to patients taking their own products, Pfizer thought more broadly about the audience for its new digital campaign.

Pfizer's Oncology Together programme considers patients' clinical, lifestyle and psychosocial needs while also addressing factors such as access to transportation to reach specialty treatments. It offers social workers called 'care champions' who help patients and caregivers with day-to-day challenges. Oncology Together also has a component to support providers trying to help patients with prior authorization, medical appeals or cost.

The accompanying mobile app, LivingWith, allows cancer patients to record notes from doctor appointments, manage data from wearables and connect with family and friends for meal assistance or to share test results. It also spotlights inspirational stories of people living with cancer. Until recently, the perception has been that cancer patients are so sick that they are not interested in digital capabilities. In reality, more people are living with cancer and want help improving their quality of life, just like other pharma customers.

And although patients using other companies' drugs might use the Pfizer program, the firm will experience indirect benefits from the goodwill it inspires in physicians, caregivers and other patients who appreciate the support. More important, the company may develop better understanding of patient needs as compared to more traditional ways of conducting patient research (in which cancer patients are invited to a staged focus group and asked questions about theoretical situations). This broader engagement program provides an opportunity to see how a large group of patients is truly feeling and how the medication is working for them.

Sources: Pfizer, 2017. *Pfizer launches novel programs to put important support services at the fingertips of cancer patients*.

Patients and caregivers have expressed a clear desire to make interactions more efficient and less time-consuming, even if it means sacrificing privacy. In our recent survey, 63% of consumers said they are willing to share daily symptoms with pharmaceutical companies.[5] In the past, patients were recipients of information; now they arrive having already studied WebMD and other online resources, prepared to become partners. Pharma can capitalise on this underlying willingness to collaborate and innovate by acting as a content provider and facilitator of the exchange of information.

Companies can strengthen their relationships with oncology patients by surrounding them with digital support. Tracking more health data through wearables and mobile devices can help pharma companies understand where new opportunities lie. For instance, if patients start reporting an uptick in certain symptoms or new challenges, pharma may be able to develop solutions to address them. In markets where patient access to care is a problem, digital tools can help connect patients to providers or screening programmes.

Digital portals can also be a conduit for delivering real improvements for patients. A study at New York–based Memorial Sloan Kettering Cancer Center found that patients receiving chemotherapy for metastatic solid tumors survived longer when they used a web-based tool to document their symptoms.[6] Patients were asked to answer questions about 12 side effects of chemotherapy, and nurses were sent a notification when any symptom reached a certain level or worsened from a previous entry. The median overall survival for those who had the self-reporting tool integrated into their care was five months longer. The researchers attributed the increased survival time to the fact that physicians and nurses may miss many symptoms patients experience in between their appointments. When symptoms are not reported or acted upon early enough, it can disrupt treatment. Further exploration is needed to capture the opportunity that digital applications may offer to improve patient experiences and even outcomes.

Developing the right digital platform strategy will mean prioritizing who it is you want to engage: the patient, the physician, the caregiver or the patient advocacy group. With physicians reporting digital fatigue, intuitive tools that make data input less of a burden may demonstrate a pharma company's willingness to keep provider needs in mind, thus improving the company's positioning. These platforms can help firms collect data, but also help gain access to a large population of potential influencers. By defining a clear priority group and determining whether the engagements are transactional in nature or more relationship-based, companies can make more strategic investments effectively.

5 PwC Health Research Institute, 2016. *Patient engagement: Pharma's strategy for success in the New Health Economy*.

6 Memorial Sloan Kettering Cancer Center, 2017. *Online symptom-monitoring tool improves survival for those undergoing chemotherapy for metastatic cancer*.

3

How do I navigate a changing provider landscape to gain access to both academic medical centres and patient volume?

The provider landscape is shifting rapidly. The proliferation of electronic medical records and the advent of big data analytic platforms as a means of combining unstructured data sets is challenging the distinctions between academic medical centres and community practice networks in clinical research. Although academic medical centres play a crucial role in the development of trials for new treatments and more advanced practices, it is community networks that serve the majority of patients.

In the US, for example, community cancer centres are consolidating into larger, more corporate entities. In India, centres of excellence for oncology have emerged to attract sufficient patient volumes that support the investment required in cancer care. Roche is encouraging more collaboration among different players around the world, and some of its affiliates are looking to develop ecosystems at a subnational level that encourage such collaboration between physicians, pathologists, diagnostics, tech and industry. The ecosystem model presents pharma an opportunity to identify new treatment combinations, obtain real-world evidence and find innovative ways to show value in contracting. Some markets also are seeing the rise of 'hybrid' centres, in which academic medical centres extend their expertise and credibility to the community cancer centres that have the patients.

Pharma needs to develop strategies that can target different types of providers effectively. Within the academic and community worlds, companies must further customise their approaches — the leading centres require different strategies than smaller operations, and larger integrated delivery systems may require different handling than the smaller but independent community offices.

Pharma companies should enter collaborations strategically. A partnership with an academic medical centre that has a strong connection with three community cancer centres can expand the patient base for trials to give the pharma company a better understanding of how its product is used in the community as well as in an academic setting.

Clinical care pathways: Where do you stand?

With the consolidation in cancer care centres, some larger entities have incorporated a top-down approach to clinical care pathways, which can mean less flexibility for physicians to deviate and choose another treatment. Some academic centres are creating tools to democratise their expertise by sharing their clinical care pathways. For example, Dana-Farber Cancer Institute in Boston is integrating its clinical pathways into Philips IntelliSpace Oncology platform, providing physicians with clinical decision support based on Dana-Farber's best practices.

The development of these tools and adopted network-wide practices may shrink the visibility of certain products and therapies. Whereas at one time, a cancer centre may have been considering 10 treatment options, now it may have only two on its radar screen, depending on the pathway system. That can be terrifying or exciting to pharma executives, depending on where their product is positioned in that scenario.

Pharma has to understand how these different players are determining treatment protocols. Highly organised provider systems may not be as transparent about the systems and data they are using to select approved drugs. With more therapeutics available in oncology than five to 10 years ago, are pathway adopters selecting the product they are most experienced with, or going with the latest product? How do pharma companies play a role in educating the decision makers and constructing their own data argument to be able to defend against inappropriate or less sophisticated protocols? Pharma companies have to understand which cancer centre networks are bound by strict adherence rules and which may provide physicians some autonomy.

Source: Becker's Hospital Review, 2018. *Dana-Farber Cancer Institute, Philips partner to provide cancer decision support to physicians*.

4

How do I demonstrate value to payers, providers and patients?

71%

of pharma executives understand the potential for value-based deals, but only 25% have actually been involved in one.

The aggregate cost of innovative therapies has moved managing cancer pharmacy expense to the top of payers' priority lists. As a result, experimentation with risk-based reimbursement and capitation models in cancer will increase. Amid the outcry over pricing, more and more businesses want to see the value associated with specific uses. Oncology care models will expand, while the underlying principle of paying for outcomes will continue to gain traction beyond Medicare. As more cancer treatments around the world shift from acute to chronic disease management, payers and providers regard the price argument differently as well. Innovation further complicates pricing, as treatments that target specific stratifications of patients with certain biomarkers also mean shrinking patient pools for a particular drug. The move toward combination drug therapies in oncology means it's not a matter of choosing drug X over drug Y, but rather a treatment that is part of drug X, Y and Z.

With an increasingly complicated tapestry of drugs used to treat each patient, those manufacturers that demonstrate they can properly identify the right patients and detail how their product contributes to a larger positive outcome will have better standing. One key step in doing so is to weave the value question into the R&D process from the beginning, collecting evidence that will enable the compound to pass regulatory requirements and also demonstrate its value. Pharma companies are inviting personnel to the table who can make sure that payer concerns are being addressed, with some conducting payer research before signing off on Phase III clinical trials.

Although value-based contracting has made headlines, companies have only just started experimenting in this arena. In some markets, the conversation is stalled on cost and hasn't evolved to the value proposition, with systems struggling to serve high rates of uninsured patients or patients paying for care out of pocket. Research from PwC's Health Research Institute shows that 71% of pharma executives understand the potential for value-based deals, but only 25% have actually been involved in one.[7] So instead of focusing on value-based contracting, companies may benefit from pursuing value-based engagement strategies that highlight the value the company brings as a whole, such as in improving patient quality of life or the totality of the research contribution on a particular disease. Data arsenals come into play, too. Companies that have been driving to capture real-world evidence are better positioned to make that value argument with customers.

With eye-popping, six-figure price tags for some cancer treatments, providers struggle with the daily implications for their patients and their practices of prices that can appear to be set to maximise profits, said Dr. Franklyn Prendergast, former director of the Mayo Clinic Comprehensive Cancer Center and former board member for Eli Lilly who now serves on the advisory committee for the Biden Cancer Initiative. "The companies need to be more transparent," Dr. Prendergast told PwC in an interview. Many patients don't understand what goes into production of the drug, how it works and why a particular drug may work better for a particular patient. "It's also important for the public to understand, when an explanation is given, that they determine for themselves what is a reasonable markup, what is a reasonable profit margin that companies could and should expect for the innovation," he added.

7 PwC Health Research Institute, 2017. *Launching into value: Pharma's quest to align drug prices with outcomes*.

5

How can I deploy commercial engagement model innovation simultaneously to strengthen my competitive position and better meet the changing needs of my customer base?

> **Pharma needs to become a provider of the data and the science that customers need by putting themselves in their customers' shoes.**

We routinely poll the oncology provider base to assess their perception of where and how pharma companies can add incremental value. That research leads to two conclusions: 1) pharma has a clear role as a critical content provider, with investments in research, development, real-world evidence, patient identification and clinical management regarded as highly valued assets, and 2) the current engagement model is not meeting these stakeholders' needs. Although a better model is not yet proven, the opportunity to develop innovative alternatives is ripe.

With a shifting cancer care landscape that is growing more consolidated, the person-to-person sales model is dying. If a medical centre has top-down protocols, companies waste time, talent and money deploying rank-and-file sales members. Firms may consider adding account managers with more institutional experience who can deal with the network cancer centre administration and build a larger case for the drug's inclusion. This may require a reorganization of sales forces.

Pharma also needs to become a provider of the data and the science that customers need by putting themselves in their customers' shoes. Doctors, hospitals and health systems are increasingly judged more on outcomes, and those results are being published. Patients can access these results and make their own judgments about where to seek treatment. As these metrics are being imposed on hospitals, those providers with higher readmission rates may be penalised, and pharma needs to support providers dealing with the implications of these scorecards. For example, if a cancer centre is being rated on patient satisfaction, and a large part of that satisfaction is determined by how well the patient feels, quality programmes that help patients manage nausea and other symptoms could help the hospital avoid negative ratings. Traditionally, pharma has thought more narrowly about its support programmes, but must recognise the new pressures on providers.

Leaders in the market will pursue pharma commercialisation models that are more about service and education, with an approach that's credible, not just promotional. Innovative players already are remaking their engagement teams to act more like medical device representatives, who partner with doctors, scrub in on surgeries and become a lot less sales-like and more consultative.

Conclusion

Innovation is fast-paced in the crowded oncology space, and it's urgent for executives to have clear, comprehensive strategies to succeed. Against the backdrop of a changing provider landscape, a race to capitalise on the explosion of data, public pressure to show value and the need for new engagement models, pharma companies that succeed for all their stakeholders won't satisfy themselves with tweaks to traditional strategies. These market forces call for a fundamental reevaluation of the approach to identify the capabilities that will differentiate your company in this changing oncology market. With an immense amount of data at their disposal, companies that make the right targeted investments stand to see their bets pay off. Engagement strategies that enable companies to show value to payers, providers and patients in creative ways will produce significant benefits for society in the future.

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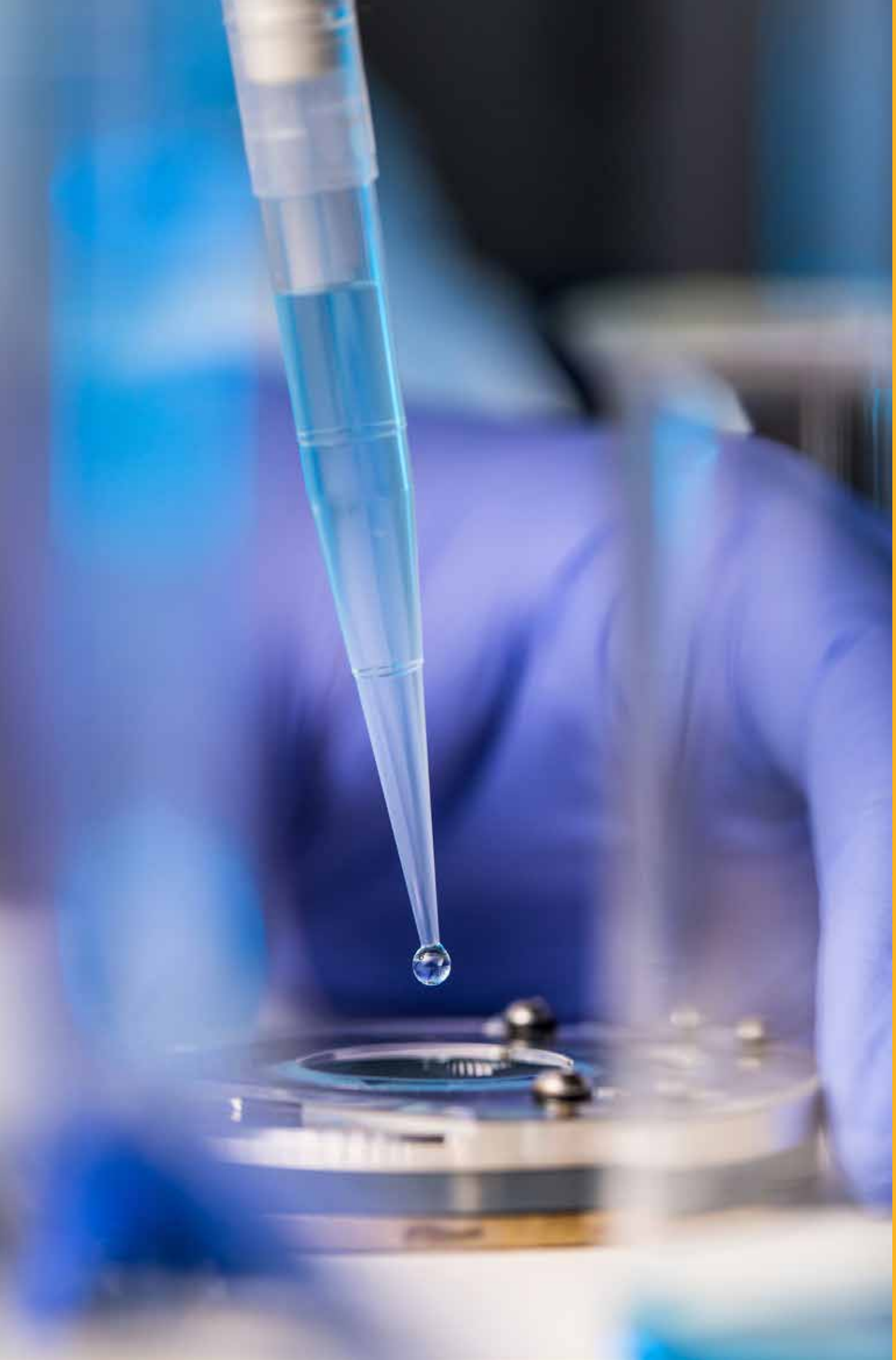

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