

[Transcript] FYI - For Your Innovation / Discussing Our Exact Sciences Valuation

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Additionally, arc does not have investment banking, consulting, or any type of fee-paying relationship with the subject company. For more information on arc's exact sciences forecast, including the risks and limitations of the model, please refer to the exact sciences article on arc-invest.com. Welcome back to FYI, arc's four-year innovation podcast. Today I'm your host, Tasha Keeney, director of investment analysis at arc and institutional strategies. I'm joined by Simon Barnett, our director of life sciences, and today we're going to talk about exact sciences. So, Simon, tell me, what does exact do, why do we care about this company?

Yeah, thanks, Tasha. I'm happy to talk about this. So, exact sciences for folks who don't know is a cancer testing company. So, roughly 90% of Americans over 45 are actually familiar with exacts largest testing franchise, which is called KolaGuard. It's an at-home colorectal cancer screening

test approved by the FDA, launched in about 2014, and has since scaled to now over 10 million units

sold. But exact does a lot more than this, right? So, exacts second largest test is called Oncotype, and what people may not know is that this test actually guides medical care for roughly 70% of women in the US who are diagnosed with certain forms of early stage breast cancer. So, exact, you know, solely focused on oncology. They're continuing to grow from their core business, like I mentioned, with KolaGuard and Oncotype, adding more new tests that are going to cut, touch other parts of the cancer care continuum. And they've been around, you know, for several decades now, but their first major products were approved, like I said, just a few years ago in 2014. Gotcha. And, you know, taking a step back, okay, we understand a couple, like, what their business model is about, but why do we care about, like, what is the market? How would you define the market that exact is in? And why is it interesting to us at ARC? So, cancer is the main subject here, and I really want to focus on oncology because it's such a universal thing. I think everybody, to some extent, can relate to it, whether it's impacted them personally or maybe a family member. And when we talk about oncology care, there are two big components of this, right? So, there's diagnostics, and these are tests that are designed to detect cancer earlier, so that's called screening, figure out how aggressive cancer is, that's called prognostics, monitor cancer over a treatment cycle, and figure out, like, the best course of therapy. So, all of that, collectively, is cancer diagnostics. And the reason we care about it and focus on it so much is because it's a big problem, right? Not just in the US, but everywhere. So, if I zero in on some numbers, roughly 2 million people every year in the United States are diagnosed with some form of cancer. And the number of survivors, right, people living with cancer, some that are, you know, many years away from treatment, but some that are, you know, just barely going into remission, you know, we think that number can grow upwards of, you know, about 20 million people over the course of this decade. So, it's a really pervasive problem, certainly a place that we really focus on, it's a national priority to invest in and underwrite, you know, research into. And so, to, I guess, sort of, you know, focus on the fact for a moment that cancer care is something that is totally, you know, divorced from interest rate changes or consumer sentiment, it's something that's very predictable and it's something that's very important. Especially now, as the community has moved through the COVID-19 pandemic, where there was like a 20 or 30 percent drawdown in the number of oncology visits that were happening around the world, which has resulted in a lot of, like, late diagnoses, and also a ton of missed screenings. I think the most recent stat that we found was, in the US alone, more than 30 million screening appointments were missed, you know, whether it's mammography or colonoscopy, right, so it's a really pressing urgent issue to focus on it. And I'll end by saying that, you know, currently, just in the US, we think that this market is around five billion dollars in revenue, the molecular cancer testing market, which we think can continue growing about 20 percent or north of that, year on year through the end of the decade, getting to about 24 billion by 2030. And if you look at it today, it's interesting, but just with exacts core business, right, so oncotype and coligarde, these two tests together comprise, we believe, you know, more than a third of the entire market today is controlled by exact sciences, so certainly in a pole position in terms of revenue and, you know, continuing to grow from there. Got it. And if we wanted to learn more about that research stat that you just gave, where would our listeners look? The best place would be to check our open source model for exact sciences that we just published on our website a few weeks ago, so arc-invest.com. You can search for exact sciences and you can find, you know, a overview of the market itself,

so we start by talking a lot about cancer testing, you know, some of the dynamics there, how it was impacted by the pandemic and how it's recovered from some of the worst parts of, you know, of that. And that's the best place for people to look and test our assumptions and try to understand not just the market, but also exacts place in it and how they've pioneered the space historically and where they're taking it. Great. And if our listeners want to look into more of our top-down work, some of the great work that Simon's done, we just published our latest big ideas report. So also check that out and Simon will be presenting that soon in a webcast, so I'm excited for that. But okay, so you published this exact model. There's a blog that goes along with it. There's a model that's on GitHub that people can use to play around with your assumptions. Where do you start here with a company like this? Like, how do you value this company? What should

you be thinking about? So, yeah, let's just cut to the chase and kind of look at the company and the valuation work. So, you know, like our other open-source models, we've published a price target, you know, over the five-year investment time horizon that we really focus on. And we've also provided base case, bull case, and bear case assumptions that any readers are free to kind of toggle and challenge and adjust and see how that affects the valuation. So maybe what I'll do is I'll focus on the base case briefly, go through the numbers, talk a little bit about how we get there, and then we can sort of backstep and maybe get into more detail. So the headline is that we believe shares of exact sciences could expand from, I believe, around \$60 a share today to about \$140 per share by 2027 in our base case. So let's talk through this a little bit. I've already mentioned some of the core on-market tests that the company has launched, right? So Colegard and Oncotype are the two of them. We believe that those are going to continue to grow north of 15% per year, reaching about \$4 billion in revenue by 2027, right? So the company just passed \$2 billion of revenue this year in 2022. So we think that can double in five years. We also think it's really important that the company is able to achieve operating leverage and get to that EBITDA, breakeven crossover point, and then continue on to be cashflow positive, obviously self-funding, and continue to leverage the infrastructure that the company has built over the years.

Maybe one quick stat here, and we can circle back in more detail later, but it's really tremendous that for every dollar invested in R&D over this company's lifetime, they've been able to generate \$6 of revenue. So there's a tremendous amount of leverage on the R&D line. And what we're looking at now is to see how that's playing out with both sales and marketing and general and administrative expenses. And we can look back to that. But to end with what's going on with the base case, there's a couple other things that we're assuming here. And that's that the company, again, continues to reinvest its earnings and its pipeline tests, which are really exciting, and we'll get into those servicing the company's outstanding debt, as well as maintaining capital equipment. And really, the diagnostics business is not as capital intensive as something where you have to build out a lot of brick-and-mortar facilities. Diagnostics companies are really heavily centralized and high volume, typically in a small number of concentrated places. And that's what helps get leverage on the CAPEX component. And then lastly, we expect the company's pipeline

tests, and I can get into a revenue breakdown. But we would hope that the pipeline tests get to about a billion dollars in revenue by 2027. And the thing to, I want to be really careful about this, because a lot of times we hear pipeline in biotech and think about, these are like drugs, right? These are really risky. Most of them fail. Most of them take a decade plus to commercialize.

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That is not the case in diagnostics, right? So diagnostics tests generally are much lower in terms of technical risk. The challenge is building up enough data on the clinical utility of a test to get payers to underwrite and reimburse them. And so that does take time. But the important thing to know here is that several of the company's pipeline tests are commercializing already in 2023. Many of them already have clinical utility data out there. In some cases, they're like the largest prospective trials ever conducted in their class. So it's not something that looks like a pipeline drug, right? It's a little bit different there. And to conclude on a revenue breakdown, just to kind of give people a little bit of a zip code for what this looks like, I mentioned today, the core business generates \$2 billion in revenue, 70 plus percent gross margins, which is really high for diagnostics. And just about 2% of revenue this year is coming from pipeline or emerging tests. And in the future, in our base case, we believe that the vast majority of that value is still going to come from core tests, right? So we think about 57% of revenue is going to come from KolaGuard in 2027. Another 25% is going to come from Oncotype in 2027, with that kind of remaining percent coming from various pipeline tests.

Got it. Okay. So \$4 billion on the growth in the core business, another billion on these pipeline products. Right. So just crossing about \$5 billion in aggregate top line by 2027 in our base case, that's right. Okay. So we're getting a picture of what the top line forecast of this company looks like. How does that translate into your price target, ultimately? How do you get to this \$140? So indeed, yeah, the top line is really an important piece of it. But when we looked at how to value the company, we wanted to not just focus on getting really good at kind of showing where revenue could go in five years, but also understanding kind of the underlying profitability of this company and how they're continuing to gain leverage. Because in our valuation framework, as people can see in our model, what we've done here is we've modeled out really discreetly unit growth, revenue growth, margin, gross margin growth over five years. And then what we've done

is we've taken a some of the parts method where we've tried to value the company according to two multiples that we feel are fairly industry standard. So looking at it in terms of EV to Epida and EV to sales. So maybe I'll quickly go through why we did that. And we can talk about the operating

margin structure of the business and how some of the revenue that they're generating on the top line

is falling down to the bottom line. So again, I use the word core and pipeline. And the reason why I want to do that is because when you're thinking about the company, right? So Kolegaard and Oncotype are already some of the largest FDA approved diagnostic franchises in the country, if not the planet, and they generate a ton of gross profit. In fact, just those two tests alone, we believe allows exact generate more than four times the gross profit of any of its closest peers, which is a great kind of unique differentiator the company has to reinvest in its business. And that's on a dollar basis. Exactly. Exactly. Yeah, not percentage basis on a pure absolute dollar basis. And so I mentioned that stat earlier about R&D leverage. So the company, if you look at a 70 plus percent gross margin product, you're in a great position to start generating actual net income. The R&D line is pretty small relative to what that top line figure looks like. And then you start thinking about, okay, well, now that these are commercialized, there's a ton of evidence out there. How are they continuing to leverage their scale and really have more money fall down to the bottom line? So I think I want to tackle this first on a sales and marketing perspective.

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Like diagnostics is very expensive to get a product up and going. But if you think about the relationships that the company has built here, more than 98% of oncologists in the country have ordered a test from Exact Sciences. And about that same percentage of primary care doctors have ordered Colegard. So there's a lot of brand recognition and physician goodwill that the company has engendered over the years. And what we're seeing now, and it's really interesting, especially with the most recent numbers coming out of the JPMorgan Healthcare Conference, for two years in a row, the company has now lowered its sales and marketing spend, not just on a percentage basis, but on an absolute basis. And still, they've put up more than 30% organic growth, ex-COVID testing, in the core business. So we're at this point now where I think we've crossed over from this being something where the company has to push under the system and continue generating evidence to something that is becoming increasingly baked into the standard of care for treating and preventing colorectal cancer in this country. And then the second piece of the business, looking at pipeline. So the pipeline tests we think are going to be, like I said, from a revenue basis, a lot smaller than that core business in 2027. And so these businesses are going to be less profitable, certainly on a unit basis. They're going to share a lot of the same underlying technologies, which is, again, part of why you see such great R&D leverages. Each new pipeline test, it can be put on the same platform. Many of them are actually sold into the same patient and physician population. So it gives your sales team the great ability to be more productive in those conversations with their clients, because they're able to actually offer a broader menu without having that customer acquisition friction that you'd need for a totally new market segment. So that's one of the places we're expecting a little bit more leverage there. And so essentially what we've done is we've taken an EV to EBITOM multiple, applied that to the core business, which is becoming increasingly profitable. And for the much smaller pipeline tests, we think that those are going to be more evaluated on an EV to sales basis, where people are really focused on their growth, less so their profitability when they're just coming out of the gate. If the company has already demonstrated its ability to get those unit economics over its core business at this scale, we think that it's very likely they'll be able to do the same thing with the emerging tests. So we add those two things together, and that's the way that you get the five-year target. Got it. So essentially, you think they get this great leverage from the platform they've already established. This allows them to basically have with the same spend on sales and marketing, or maybe even less spend, those dollars go further. That helps the pipeline products. And you're using EV to sales for pipeline, EV to EBIT for the core business. I guess, what do analysts in the industry typically look for as benchmarks for these types of companies and in ARCs process? How do you think that our view might differ from the street view? The first thing that I'll say about street consensus with diagnostics companies in general, and exact in particular, is if you look at the number of people who've submitted price targets for the company, it drops off precipitously after about two years, maybe three. And one challenge with that is that something that penalizes, exact, is that anytime it's spending money, stay on R&D to develop a new test, or on G&A to build up the infrastructure necessary to launch more tests, those get penalized, or those are used to penalize the company, obviously, because they're counted in OPEX, but there's no downstream benefit that is factored into the modeling. And so I think one of the great things about having that five-year time horizon is that

we're able to capture and balance both sides of that. Like, yes, we're trying to model OPEX here, and that's something that people can actually go in and change in the model. To be clear, we are assuming that each component of OPEX increases, right? So that's in the model between single, like mid to high single digits for each of the categories. We just have revenue growing a lot higher than that. And on an absolute basis, you can start seeing actual net income start to fall through by the end of our forecast, right? So that definitely is a factor. But where we might differ is in a couple places. I think the first place that we see some differentiation out at five years is when you're thinking about how the very highly-scaled core business interacts with pipeline tests, like biologically speaking, or from a data perspective. So let me try to unpack that a little bit using Oncotype actually as an example. So Oncotype, that test is used to essentially tell women who are being treated for breast cancer if they're likely to benefit from chemotherapy, or if they can avoid it and not have to undergo that cost and that anguish without deriving any clinical benefit. So as I said, that is a standard of care in the United States. It's backed by the largest amount of perspective peer reviewed evidence of any prognostic test for that indication. And it's now being launched internationally in markets like Japan, for example. So the thing about this though, when you're trying to develop, and let me talk about a type of pipeline test, so one of the most exciting areas for them is an area called MRD, or molecular residual disease testing. We estimate that this market can be north of about 25 billion in aggregate, just in the US. And it's less than 1% penetrated today. A lot of companies working on it, but it's very nascent. And we think exact can command a really important position in this market as it grows. So what MRD testing is, is after you've gone through treatment and you've been given chemotherapy, surgery, radiation, typically what happens is, you know, physicians will use inner scanning medical imaging to kind of assess a person's response to treatment, which is great. There are some drawbacks to that in that sometimes it's very difficult to catch if a cancer is going to recur. So over the past few years, as the cost of doing DNA sequencing, which is a really critical input for doing this type of testing, as that has like absolutely collapsed, this world of MRD testing has exploded. And essentially all it is is a blood draw. So to you as a patient, it would just look like a blood draw. It can even be done at your own home. But in the background, we're sequencing that blood and looking for the smallest emergence of reemergence of cancer after treatment. And so breast cancer is a huge market, colorectal is as well. And so the fact that exact is already in, you know, has relationships and has built out the infrastructure to serve the breast cancer community, both the patients and the physicians, I think the attach rate and the knock on effect for launching, you know, a breast cancer MRD test, for example, is being kind of underappreciated just on the commercial side. But from the test development side, another really interesting thing is that something like 50 to 60% of all breast cancer samples that are being, you know, biopsied and used to run Oncotype are going through exact doors, right? That is an a tremendous advantage when it comes to understanding tumor biology with breast cancer, being able to study it, analyze it, train the machine learning classifiers that are used to distinguish between cancer, non cancer for an MRD test. It's not something where you can synthesize the data or capture it another way, right? These are like biologically locked in, we know how many cancers there are going to be each year. So it's a very finite resource. And that's just one example. But to generalize it, I think there are a lot of commercial synergies that go a little under appreciated between the existing business and the pipeline, you know, again, both on the

commercial

side, you know, and on the R&D side. And that's where I think we're getting some of these slightly higher than consensus numbers out at 2027, even though there's really not a lot of consensus numbers in 27 to begin with. Yeah. So, you know, you're hitting on this point that we make a lot, which is our arc is focused on this five year time horizon, which isn't that typical in the market. And then what I also love that you said is you describe the why now, you know, why do we care about these markets now? And, you know, to highlight Simon's research again, it's because the cost of

sequencing is coming down, or at least that's one of the doors that gets opened.

Yeah, that's right. If you think about like the supply side innovation, the ability for these companies to be more profitable at scale is something that I think, you know, in a traditional setting, like oftentimes you have people that are really focused on the hardware, like the enabling hardware, and then the applied markets, right, like diagnostics. And there is definitely communication between those two. But I think it's really important now because we're at an amazing inflection point in the DNA sequencing industry, right? So we have a situation where in the early 2000s, this type of test would be completely cost prohibited. It would cost billions of dollars. In fact, it costs more than a billion dollars to sequence a human genome in the early 2000s. And then in 2015, it was \$1,000, and now it's circling in on 100, right? And there's no reason to believe those costs are going to stop going down. And that is a main component of cost of goods for certain types of molecular cancer tests, right? So sequencing has really opened the floodgates and not only in our ability to like make these things actually like economically feasible, but also make them profitable at scale, where they become even cheaper than their legacy counterparts like medical imaging. In fact, we, you know, in our big ideas presentation, which people can now access, we look at something called multi-cancer earlier detection, which we think can be actually the largest contributor to the overall cancer testing market, you know, at maturity. So multi-cancer testing just quickly for those who don't know is a blood test that instead of looking for a specific type of cancer, you know, screening for a specific form like colorectal, looks for as many as 50 different types of cancer simultaneously in the bloodstream. You know, we have done some health economic research on this. And essentially what we've found is that for adults aged 45 and up, it becomes economical to screen these people with a blood test that costs \$500, right? So if that's the most you can charge and sequencing is \$1,000 just as recently as 2015, no one's going to enter that market, right? Because it's a negative margin product. But now that we're at this point where we can generate this data for under that \$500 envelope, it starts becoming really attractive. And that's why we've seen so much company formation in this space. An exact, you know, right along with companies like Grail and Freenome are at the vanguard of multi-cancer earlier detection. So we're really excited about that as well. Yeah. So does that top down thinking factor into how you think about the margin structure here as well? Definitely. So the first thing that we're doing is trying to understand the gross margin side of this business as well. And so if people take a look at the model, what they'll actually see in our input table is a gross margin assumption around every product line. And that is largely informed by the biology, right? So it's informed by how deeply, how much sequencing you have to do, you know, how many gigabases of data you have to generate, what the cost of sample prep and bioinformatics on the back end are. So that's one of the ways that we're getting to the aggregate gross margin structure is trying to understand both product mixed when

these things come out, how quickly they're going to scale, how large their markets are. But also to your point, what the cost of goods is going to be, right? So the top down modeling absolutely informs market structure for specific companies. Yeah. So, you know, I'd love to talk about, you know, we've talked a lot about the modeling work, how your top down modeling fits in with this bottom up analysis that you've published online for everyone to see, recommend checking it out. There's also a qualitative element to covering companies like this. Maybe let's talk a little bit about, you know, the things that our looks for in our investments.

So you're definitely right. When we're looking at these investment opportunities, we have a rubric that is certainly incorporating that five year cagger, right? That price target over five years. And so for us, you know, we look at these investments

and say, you know, if they pass our 15% hurdle rate on a price target basis, that's, you know, a definite qualifier for being interested in an opportunity. An exact definitely, you know, qualifies and people can go and test that. In addition to that, we think about factors like product leadership of a company, its track record of execution. If there are any moats for the business, what type of moat there are, but we also really care about people management and culture.

And all of these things interweave to give us a more holistic view on how we think about these companies, right? And so maybe I'll extend that to exact, for example, and kind of talk about a few things in each of these categories, right? So for product leadership, I think that's definitely the first place to start. I already mentioned that KolaGuard and Oncotype are together, roughly a third of a market that we think is both extremely important for humanity, but also in terms of its ability to grow over the next market cycle. So that's the first thing. You know, these are tests that are very high margin. You know, they're backed by some of the largest ever studies conducted in their class, especially longitudinal ones, right? So oftentimes oncologists are typically pretty conservative. And in order to adopt a new thing, they want to see five-year, even better, 10-year outcome data. And Exact has done those studies, right? So it's difficult to speed up time. So that's one of the things that's really important here is just understanding that these have been in the market for a while. They've gotten past that standard of care point. And that's something that I think gives you leverage as a business. And then also the performance of these tests, right? Like one of the things about KolaGuard is the performance of the test, right? So it's got sensitivity, the ability to detect the cancer, specificity, the ability to not throw off a bunch of false positives that are industry leading for a non-invasive test for both of those, as well as the ability to detect what are called advanced adenomas or pre-cancerous lesions. So the really interesting thing about that is that when you're able to detect these pre-cancerous polyps, a screening test becomes more than just a screening test. It actually allows you to prevent a cancer diagnosis in the first place, which is very valuable to health systems. It's where a disproportionate amount of medical benefit and utility comes from for these types of things. So we're assessing the products also in terms of their technical performance, as well as how expensive they are to run, right? So I already mentioned, even at a \$500 average selling price for KolaGuard, the test is still at, you know, 70 plus percent gross margin, right? So these are some of the things that we think about there. Track record of execution is another really important one. So trying to understand how the company has, you know, contended with the need to publish clinical data to get it out there,

to design these studies really rigorously so they don't have to do them again, which is a challenge in the diagnostics industry, especially with a very stringent FDA and other regulatory bodies. So that's definitely a component of it.

The proof points around, hey, look, you know, we think we're going to get to cross over on this point and actually proving that out and staying true to their word. I think something that was very surprising for people was hearing just a few weeks ago at the JPMorgan conference, you know, Exact was saying, look, you know, we think we're going to get to profitability on an adjusted EBITDA basis, you know, in Q3 of 2023 was the target. They've been able to pull that forward and actually get to that point, well, this past quarter, Q4 2022. So being able to kind of meet those things and consistently do that over time is really important. On moat, you know, I think there are a handful of different moats with Exact Sciences that we think are going to allow the company to maintain its position as a leader in this market. But let's be clear before I go deeper into that topic that, you know, Exact is not the only molecular cancer testing company that we have exposure to in the funds. We don't necessarily view the market as totally zero sum where like the success of one company has to come to the total detriment of the other.

There's a lot of room for this market to grow, right? We think the aggregate total investable market or total addressable market for these tests in the US is about 95 billion, right? And we're only at about five today. So there's plenty of room for everybody to continue adding to that space. But for Exact, I really think that, you know, companies will come out and launch

colorectal cancer screening tests, you know, new ones will emerge, we're invested and excited about some of these new ones. But to really dig into it, it's like, look, you know, the fact that Exact has this ordering platform, has it some instance in electronic medical records that are adopted by many health systems that most oncologists recognize the brand that more than, you know, like I said at the very beginning, 90% of Americans over 45 have heard of Colagard.

These are just like intangible, unique advantages this company has that I think are going to bear a lot of fruit as they continue to expand and grow and launch new tests that are going to be very difficult for others to really compete with. And so those are some of the things that we think are feathers in Exact cap. Got it. Yeah. So it sounds like they have this really strong moat.

You know, I want to touch on something else you said, which is, you know, execution is one of the things that we look for when we monitor our companies as well. You know, for you, you're watching this earnings crossover point that management has forecasted that happened sooner than expected. I guess, how do your expectations for this company compare to what management is expecting? I think they're fairly in line on a few different areas. And maybe I can mention some specifics to try to juxtapose how we think versus how management thinks. So

I'll start with the core business because that's where we have the most, you know, quantitative data to really dig into. Our model says that Colagard itself, both the stool based version and the emerging blood based version together, which we don't split them apart in our model. But together, we think that that can go to about 30 million unit by the latter half of this decade. And that's roughly in line with what management has said. I think they drew a line around 30 million, you know, in the waning years of the 2020s as well. And if you think about that, and you start saying, okay, what are the ways that we're going to get there? There's a couple things that I think people should be paying attention to, regardless of if their time horizon is, you know, five or 10 years, or even if it's just as short as a year, that we think support this

conclusion and that we've arrived at, I think independently. So I'll go through a couple without getting too long winded. But one of them is that just a few short months ago, the American Cancer Society expanded guidelines for colorectal cancer screening, saying that people age 45 and older should be screened, not just 50 and older. So this grew the market by about 20%, actually, almost overnight. And it's a place where exact is already seeing a lot of initial wins. Another area is that the Center for Medicare and Medicaid Services just this past year enacted a new piece of essentially a new piece of reimbursement policy that made it to where people that get tested with a test like ColaGuard and show up as as positive for having cancer, can go and get a confirmatory test like a colonoscopy at no additional charge, you know, if there are Medicare beneficiary. This was not the case as recently as 2022. In fact, it was a reason why a lot of people had trepidation to even get screened is because if they were not covered for colonoscopy, that's, you know, more than \$1,000 plus, you know, co-pay and lost time at work. Right. So these are some of the things that are real tailwinds that I think are getting us to that similar estimation. In addition to that, you know, I think, frankly, I was surprised, you know, oftentimes a company will want to be, you know, really aggressive and talk up the market or its tests or, you know, to generate a lot of enthusiasm. But one thing I really appreciated, I think about exact in some of our earlier conversations, especially over the course of, you know, 2018, 2019, was that this multi-cancer testing paradigm that I've already talked about a little bit would be a huge opportunity, but something that would take, you know, many years to really pay out. I think, you know, latter half, last two years of the 2020s, maybe even even into the 2030s before it gets real traction in the oncology community. And so I appreciated kind of the candidness and the way that they've modeled that market. Right. So compared to other companies in the space who have tried to, you know, create like patient pay services up front, at least initially to kind of gain initial market traction, exact has had a much more, I think, metered and, you know, frankly, kind of slower approach with engaging on that, because I think that they understand how important it is to have a good relationship with your regulators and with your payers, because undoing that takes a lot longer than setting off, I think, on a good foot. And that's exactly how we've modeled it, you know, a little more conservatively, I think, than some other companies in the space. And so on both sides, I think they've just been very, very accurate and very candid when it comes to how long these things take sometimes. And I guess, what do you think the biggest risks to what you're predicting could be in this case? I think time is a really important one, like I was just talking about. So with the pipeline business, there's still some unknowns when it comes to acceptance and endorsement by guideline agencies like, you know, the National Comprehensive Cancer Network or, you know, ACS or some of these other ones. So there's an element of time where with a sufficiently new type of test, it can take a while before they get accepted into guidelines. Same thing is true with payers, right? So it takes, you know, many, many years for favorable reimbursement policies, even to happen locally within a small jurisdiction, let alone nationally, right? And that's typically the order that happens. So the first component is just thinking about time. And this is a place where people can go into the model and really make a lot of changes is trying to understand how long the emergence of some of these pipeline tests will take. So that's the first area that I would mention. I would definitely recognize that there is a competition risk, absolutely. And I think I've alluded to, you know, a few companies, I don't want to like say a laundry list of potential competitors. Obviously, we think

exact is still, you know, in a great position relative to those competitors based on how we've allocated to it and how we've worked it up in our model. But that's certainly another one is thinking about, okay, other very performant tests that come out, will they be able to take share, will they be able to change the pricing model such that, you know, exact has to drop its prices and thus, you know, lose some margin there. So that's something that we factor in into our model is basically how much market share is exact and titled to win based off of its position and on the strength of its tests individually. So those are our two big areas that I'd mention. Finally, I think an important one for our model is getting to, you know, that cat flow positivity standpoint, becoming self funding and being able to finance its debt, right? So I want to spend a little bit of time on the financial side as well. I think the company has executed great on R&D already. We're starting to see the same thing happen on sales and marketing in terms of leverage on that line. We're going to need to see more of it in order to continue, you know, getting to that point of true kind of cash flow neutrality and break even. So, you know, being able to consistently execute, have productive sales cycles, you know, have positive data readouts that are done well, that absorb, you know, some of that sales and marketing friction. That's one of the great things about these tests is at some point your body of clinical data does the marketing for you, right? It makes it a lot easier for your sales people to go out and win if you've armed them with, you know, great data, right? So there's a lot of interplay between those two things. So we hope to see more leverage on sales and marketing. We've taken a fully diluted approach with debt. You know, the company has, I believe, three tranches of debt converts that mature in 2025, 2027, and 2028. And we've factored all three of those into our model in the form of, you know, stock-based compensation and dilution. So that works against the price target, you know, with further dilution. You know, we believe that the strike prices will be met at that time based on, you know, equity appreciation. But that's something where people can go and change those, you know, to think about, you know, how servicing that debt could affect the valuation. So those are some places where we see risk to the model, absolutely. And these are the things that we're most fixated on quarter to quarter when we get, you know, time with the company and we get to see the new earnings reports. And, you know, the most recent data point is a great indicator. You know, that's what we're seeing. We're seeing a lot of leverage on sales and marketing. We're seeing an emphasis on business lines that are already profitable and continuing to be so. So, yeah, those are the things that we're focused on. And, you know, when we talk about risk at arc, you know, we also measure a thesis risk on all of the companies that we invest in. And, you know, that's factored in in the difference between, you know, our bear and our bull forecast. Tell me about sort of like the full range of your price targets and kind of the elements that go into each of them. Sure. Yeah. So on thesis risk, maybe quickly, qualitatively, and then I can get into some of the numbers for people to look at. But one of the great things about health care and specifically with something like cancer diagnostics is we're not necessarily burdened by is the market going to go away or is it going to stop growing? It's a simple function of population growth and, you know, cancer prevalence and incidence, which are things that are essentially immutable, right? And so we get a little bit of a tailwind there in terms of thinking about, you know, risk to the actual market. So let's maybe switch gears a little bit and talk about the company specifically and some of the places that we've accounted, you know, for, you know, a bull case and a bear case outcome. So first, I'll mention that the price targets there and get into some of the details.

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So our bull case price target at this point is \$208 a share and our bear case price target is \$74 a share. What we assume here on a high level is not too different, meaning the bulk of the valuation still comes from steady growth and increasing profitability within the core business, again, composed of Kola Garden Oncotype. The revenue figure is substantially lower. I think it's about \$6.2 billion in the bull case and just north of \$4 billion in aggregate in the bear case with a slightly lower, you know, kind of terminal growth rate. So growing 17% in the bull case and 13% in the bear case. And the reason for that comes up in a couple places. So in our bear case, we actually make the assumption that several products don't commercialize at all. Okay. So single cancer screening tests for, you know, things like esophageal or ovarian cancer, which we think the company, you know, has the capability to put out, but may choose to deemphasize because they wouldn't be as profitable. And that's something that they've already kind of done before is divesting less profitable, smaller business lines if they think that it's not going to help them get to that self-funding standpoint. So that's one thing, is the elimination of several pipeline products. In addition to that, we across the board assume less market share, right? So less, you know, ability to capture large portions of the market due to, you know, competition, for example, maybe it's because it just is not something that guideline agencies are actually willing to underwrite and to encourage. And so you start to see kind of a smaller peak for those things. And so for every different pipeline test, that gets factored in as well. Time, you know, is a natural extension of that. So we have, you know, a several year difference and when certain things will start to really accelerate and grow between our bull case and our bear case. We also have kind of friction in the background in terms of, like, for KolaGuard, for example, you know, how many people are actually willing to go out and be adherent to cancer screening guidelines, right? It's one thing to get the guideline enumerated. And it's another thing entirely to actually get the average person to be able to go out there, get tested. And some of that stuff is outside of exact control, right? It's a systemic problem. So a lot of different things are kind of factored in that cause you to get that delta between the bull and the bear case. But generally speaking, I would put them in commercialization friction, less ability to kind of maintain margin, some slowdown and adherence to guidelines, as well as timing of some commercialization events. And finally, either go or no go on certain pipeline assets that may get divested or shuttered, depending on if the company sees fit. Got it. So the variance is primarily in the, would you say it's in the top line on these, you know, sort of which products end up in the, you know, your end five year forecast? Definitely top line. If you think about a lot of those, they make it a lot harder to continue growing that top line figure. I think on a percentage basis, that's also one of the key metrics that's the most different between the cases is the top line. But it doesn't end there, right? So on margin structure, you know, if you assume basically like the ability to continue growing cogs for, excuse me, shrink cogs, for example, and continue to gain margin, there's definitely places where the margin structure has to change depending on if things go well. And, you know, I think I mentioned this already, but we've got a lot of demonstrated history on R&D, but it's a place where people can actually go in and make these changes to look at what is the growth rate from here on out going to be for things like sales and marketing, you know, G&A, R&D. And we think we've kind of adjusted our base case to be pretty conservative, actually, not assuming

a huge amount of like immediate leverage for the company. And they've continued at least over the past two years to exceed our expectations. So we feel good that those numbers are, you know, kind of creating a pricing floor rather than being super aspirational. So that's definitely a place where you're able to actually see not just top line, but also changes to the bottom line that are causing, you know, EBITDA to drop, for example, right? And do you expect this company to be cash flow positive in your horizon? Yeah. Well, so let me be really clear on this, right? So the company tracks, you know, the metric that they've given out publicly, so I'll start there and then kind of tilt over to how we think about it. They've only formally guided to adjusted EBITDA break even, right? So you're not accounting for things like stock based compensation or interest payments or things like that, which are totally real expenses. And we've captured those here too, right? So we've got stock based compensation adding to the share total and working against the price

target through dilution. But just to kind of give perspective, on a percentage basis, what exact spends on both stock based compensation and CAPEX is I think about 10%, which is half that of a lot of companies in its peer group, right? So it demonstrated some success there, but that's definitely a place where those, you know, you know, gap numbers can differ. So it's important to take note of that. They've not given any formal guidance on exactly when they expect, you know, sort of net income and cash flow to come through. I think we definitely expect them to be within our five year time horizon, but we're not giving like an exact, you know, it'll be in this date in the interim. I want to be really clear about something too. We don't necessarily want the company to be driving towards something like, you know, a dividend over the next five years or so. And part of the reason for that, which I think is, you know, well appreciated for folks that are with the company for a long time, is that they're really on the foothills of an extremely large addressable market that they have the ability to capture a pretty large and substantial portion of. So what we'd like to see them do is continue to reinvest in those activities to grow the business, while at the same time giving themselves more financial flexibility by being self-funding and kind of staying in that cash flow neutral position, which, you know, shoring up the debt, making sure that they retain some flexibility on an M&A front if there were to be an opportunity later on down the road are things that, you know, we really value and expect from the company over the next five to 10 years. Great. Okay. Well, Simon, you've clearly done a lot of great work here. You know, it's all available online again to our listeners, both in big ideas on our website, the blog that Simon produced, as well as on GitHub, you can look at the model itself. Also, everyone should check out Simon's Twitter account. It's sbarnetarc. He has a long thread that he published about EXACT as well, but he's also, you know, just a great follow to hear sort of more news on the space. I guess, you know, to leave everyone with what are you most excited about? Like, what's the future? What's the next year, you know, what you're looking for in the next five years that I should be paying attention to having just learned this story? I hope a lot of the things that we've talked about today become more of household conversations. You know, I think we were talking beforehand about how healthcare has the challenge of being not something that people are like super excited to think about or contemplate, especially if they're young. But now that we're getting, you know, cancer screening guidelines that are pushing earlier, you know, for people in their mid 40s to potentially even early 40s, I hope the conversation around healthcare shifts from something where people are very afraid of it,

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don't want to talk about it, only think of it in terms of like high acuity, severe situations, to taking more charge of their health and like preventing more serious illnesses, right? It's less so about, you know, extending your life, you know, a certain period of time, more about extending like the quality of life that you can have over a long period of time. And I think that these molecular technologies, like yes, they are esoteric and highly technical, but the main change in health that they're driving is this trend one, towards cost efficacy, so things that are cheaper, more affordable, and two, less invasive, right? So a lot of these technologies we talked about today, just a couple years ago would have required surgery being put under anesthesia, having to lose work,

over going and doing, and now we're able to get to the same quality and confidence and answer purely from things like a blood test, which can be done at home in many cases. And so I'll just end by saying that I think we're going to see a continuation and a trend in making, you know, the major components of cancer diagnostics from prevention to diagnosis to treatment and monitoring,

something that is less invasive, more affordable, and more ubiquitous, right? And hopefully that's something that will continue to accelerate over the next few years. So that's what I'm most excited about. And people can definitely interact. And, you know, like Tasha mentioned, S-Barnet ARC is my Twitter. I pinned the thread on exact to my profile, and I'm happy to take questions or answers or feedback on there if people want to, you know, play around with the model and discuss.

Great. So yet another example of how, you know, innovation really democratizes access. And in this case, you know, actually improves people's health and safe lives. So, okay, so follow ARC, follow Simon on Twitter, check out our Bigger Ideas Report to hear more about his great research. And I'll catch you next time on FYI. Thank you.

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