



GSK

GSK presentation delivered at the 41st Annual J.P. Morgan Healthcare Conference on Tuesday, January 10, 2023 at 7:30 AM

James Gordon: Good morning. I'm James Gordon, J.P. Morgan European pharma and biotech analyst. Today, I've got the pleasure of introducing the GSK presentation. You're going to hear from GSK, CEO, Emma Walmsley, and we can have the Q&A after in this presentation room. Thanks a lot for joining us today, Emma. I'm looking forward to the presentation.

Emma Walmsley: Thank you very much, James. Good morning. Good afternoon to anyone that's watching. A very Happy New Year to you all. Let me say, of course, how absolutely wonderful it is to be able to attend today's conference in person.

Please turn to our usual cautionary statement regarding forward-looking statements first, and then please turn to slide 3. Today, I want to leave you with four key things.

Firstly, GSK is now a focused global biopharma company with a unique strategy focused on the prevention and treatment of disease.

We are a world leader in Infectious Diseases with an exciting pipeline of Vaccine and anti-infective medicines and an emerging portfolio based on the science of the immune system.

We are delivering the step change in performance and competitive outlook that we promised.

And we will meet our performance goals for the decade ahead, delivering health impact sustainably and at scale.

Please turn to slide 4. One year ago, I told this conference that 2022 would be a landmark year for GSK with the prospects of the most significant corporate change for the company in 20 years, alongside a new chapter of competitive and profitable growth. I am pleased to say that we delivered on all aspects of our commitment.

GSK is now a focused global biopharma company with the ambition and purpose to unite science, technology, and talent to get ahead of disease together.

It's a company focused on the science of the immune system, human genetics, and advanced

technologies with world-leading capabilities in vaccines and medicines development across four key therapeutic areas.

Through ongoing improvements in R&D productivity and operating performance, we're unlocking the potential of GSK= and our bold ambitions are reflected in our commitment to attractive growth and a significant step change in delivery over the medium term.

Through the demerger of Haleon - a world-class consumer healthcare business in its own right - we've strengthened our balance sheet, creating additional flexibility to invest in growth and innovation.

Turn to slide 5. We've delivered exceptional progress in our transformation and performance and there's more to come.

In Innovation, we've built a pipeline of 65 vaccines and specialty medicines, many with the potential to be first or best-in-class, and we've strengthened our pipeline and platform capabilities with smart business development. We've also achieved industry-leading milestones, including the approval and launch of the first long-acting HIV medicines and the US FDA regulatory submission acceptance of the first RSV older adult vaccine candidate.

In Performance, alongside the successful Haleon demerger, we delivered strong double-digit growth in sales and adjusted operating profit in the first nine months of 2022. We raised our full-year guidance twice. Our mix has improved with Vaccines and Specialty Medicines representing nearly two-thirds of our sales now, partly due to the tremendous performance of our shingles vaccine, Shingrix. This all puts us well on track to deliver our attractive medium-term growth commitments.

We also made excellent progress on Trust, consistent with our high ambitions for patients and our people. We maintained our number one position in the Access to Medicines Index for the eighth consecutive time and ranked second in the industry in the S&P Corporate Sustainability Assessment.

Turn to slide 6. To sustain this step-change in growth-based performance, we're prioritizing our investment in Vaccines and Specialty Medicines, which we expect to grow to around three-quarters of our revenue by 2026.

General Medicines, our primary care business, will still remain an important part of GSK, optimized for profitability and cash flow.

By prioritizing investment in Vaccines and Specialty Medicines, we'll realize the increasing opportunities across the prevention and treatment of disease. Here, we believe we are uniquely positioned in terms of our strategy and capabilities.

Turn to slide 7. We're focused on four core therapeutic areas. Infectious diseases and HIV represent around two-thirds of our pipeline and are our primary focus for R&D.

In immunology, respiratory and oncology, we're taking a focused and pragmatic approach, prioritizing programs using human genetics, functional genomics, AI and machine learning to drive probability and pace of success.

We're ambitious and agile in our commitment to deliver 'smart' Business Development to support future growth.; our focus is on vaccines and specialty medicines that address high unmet medical needs and deliver, of course, on our R&D strategy.

Turn to slide 8. We start from a strong leadership position in Infectious Diseases, specifically in Vaccines and HIV.

In the last 12 months, the combined sales of our Vaccines, HIV and anti-infectives portfolio exceeded £13 billion, around \$17 billion, and that excludes the pandemic solutions. Together, these categories now account for over half of GSK sales.

We supply the broadest vaccine portfolio in the industry, we lead innovation in HIV, and we play a continuing and meaningful role in antibiotics through familiar established brands such as *Augmentin* and *Zovirax*.

Importantly, this combined portfolio is delivering strong growth with vaccines up 20% in the first nine months of '22 and HIV up 9%.

Turn to slide 9. We have a long history of innovation in Vaccines. We vaccinate 40% of the world's children.

We helped to drive the adult vaccine market with our groundbreaking shingles vaccine, and we've built a leading position in global health with relevant innovation, scale, access and tiered pricing.

We've built our leadership position in Vaccines over many, many years, and we supply 25 vaccines across 160 countries with market-leading positions in multiple key categories, including

pediatrics, meningitis and shingles.

We have world-class manufacturing, regulatory and technical expertise, creating high barriers to entry in this highly attractive category - vaccines require significant initial capital investment, large community-based trials in healthy subjects and complex manufacturing. All of this results in long durable life cycles with no medicine like 'patent cliffs'.

Governments also increasingly recognize the value of vaccination programs in preventing disease, reducing the burden of hospitalization of course, and contributing to population health and, therefore, economic growth.

We have a deep, innovative pipeline of vaccines - in '22, our pivotal RSV data was a key highlight in a strong year of R&D delivery which also saw us gain the first WHO prequalification for a malaria vaccine.

And it's relentless innovation that drives our growth. With the help of more than 15 new product launches, our Vaccines business has grown sales at a 10% compounded annual growth rate since 2000, and over the period '21 to '26, we expect it to deliver at least high single-digit CAGR, excluding pandemic sales.

Turn to slide 10. Technology is at the very core of our strategy. We have the broadest suite of vaccine platform technologies available, allowing us to select the right approach to develop the best vaccine for each pathogen, whether it's a virus or bacteria.

Among the many we have at our disposal, we have three key platform technologies.

Our adjuvant portfolio is a particular area of strength for GSK. We're applying the AS01 adjuvant used in *Shingrix* and several pipeline opportunities, including our RSV vaccine for older adults.

The second key platform is mRNA, where we're pursuing advances through our collaboration with CureVac and are increasing internal capabilities.

The third platform is MAPS technology, which stands for Multiple Antigen Presentation System. This allows us to target complex pathogens that have multiple serotypes.

With the help of this powerful suite, we built an industry-leading vaccines pipeline, which I'll highlight next on slide 11.

This vaccines pipeline includes 23 projects, most of which have first- or best-in-class potential.

Among the 15 mid to late-stage development opportunities, we have several promising vaccine candidates based on high unmet patient needs and attractive commercial potential. We're excited about our Meningitis ABCWY vaccine and our next-generation 24-valent pneumococcal vaccine.

Our earlier stage pipeline includes innovative vaccine approaches to important diseases including our first mRNA candidates and targeted immunotherapy against herpes simplex.

For today, though, I'm going to focus on our RSV vaccine candidate for all the adults, which we consider to be best-in-class.

Turn to slide 12. The unmet need here is very significant. RSV is responsible for 420,000 hospitalizations and 29,000 deaths annually in developed countries. RSV disease is a substantial burden in the elderly with almost half of all US cases seen in the over 65s.

Our groundbreaking pivotal data demonstrated unprecedented efficacy in older adults with 94% protection against severe RSV disease.

Importantly, efficacy was high and consistent against RSV A and B strains in people in their 70s and those with comorbidities. This last group is highly significant as over 90% of adults hospitalized with RSV disease have underlying medical conditions. These patients suffer the most and have the most significant impact on health care costs.

We submitted these data as part of a comprehensive package which includes data demonstrating that the vaccine can be safely and effectively co-administered with an influenza vaccine. We've already received acceptance of our regulatory submission by the US FDA, EMA, and Japanese regulators.

In the US, we're undergoing a priority review with a PDUFA date of 3 May 2023 - which puts us on track for the important ACIP meeting in June.

Given the scale of the unmet need and our potential to positively impact the health and well-being of vulnerable adults, we're confident our RSV vaccine represents a significant commercial opportunity for GSK with multi-billion pound *Shingrix*-like annual potential.

Turn to slide 13. Moving from Vaccines to anti-infectives, we are well placed to meet some of the biggest global challenges.

Chronic hepatitis B is associated with close to one million deaths annually and hundreds of millions of people are living with this disease. Our antisense oligonucleotide bepirovirsen has the potential to provide a first-in-class functional cure for this disease. We recently presented data that showed that Bepi alone or in combination can deliver a sustained reduction in viral DNA and surface antigen - key efficacy measures. We expect to start a phase III study this half-year and will update you more next month.

Antimicrobial Resistance also represents a critical threat to global health and well-being of so many. It results in more than 1.2 million deaths annually, which is expected to grow to 10 million by 2050.

We have a portfolio of agents addressing several resistant bacterial infections. Our most advanced asset is gepotidacin, which has the potential to be the first novel oral antibiotic for uncomplicated urinary tract infections in more than 20 years. Following the early stop of the two pivotal studies for positive efficacy, we plan to file a new drug application in the US for gepo in the first half of this year.

Turn to slide 14 Moving to HIV, we continue to be at the cutting edge of developing new options for patients for treatment and prevention.

This slide lists several accomplishments that speak to our pioneering innovation. I'm not going to mention all of them. I want to highlight that we developed and launched the first second-generation integrase inhibitor, the first two-drug regimen, the first long-acting injectable regimen for HIV and the first long-acting injectable for PrEP.

Turn to slide 15. Our HIV portfolio is going to transform in the next decade as our pioneering innovation advances the standard of care.

Over the five years to 2026, we expect our HIV business to grow at a mid-single-digit CAGR driven by our two-drug regimen, *Dovato*, and by increasing contributions from our long-acting agents *Cabenuva* and *Apretude*.

By 2026, we estimate long-acting regimens will generate around £2 billion of our sales to around one-third. By the second half of the decade, we expect cabotegravir to increasingly replace dolutegravir as the foundational integrase inhibitor in our portfolio, and this will allow us to manage the loss of exclusivity of dolutegravir at the end of the decade.

So, while dolutegravir-based products currently account for less than 20 percent of GSK sales,

we expect this proportion to decline substantially to around mid-single digits by the time of the LoE.

Additionally, we have a very exciting development pipeline of innovative medicines that may offer new self-administration and ultra-long-acting options. Together, we expect these to sustain our leadership position and drive growth as we look into the next decade.

Turn to slide 16. In June 2021, we set out commitments to grow sales and adjusted operating profit by CAGRs of more than 5 percent and more than 10 percent over the period to 2026.

We also provided granularity on the expected outlook by business as well as for our operating margin and our cash generation. And we are delivering on all of these commitments.

Our 2022 guidance is for 8 to 10 percent sales growth and adjusted operating profit growth of 15 to 17 percent. Each of our businesses is performing in line with or ahead of our medium-term objectives, and our margin and cash flow are all trending positively.

As a reminder, we have negligible exposure to losses of exclusivity over this medium term. We remain highly confident that we will deliver the significant step change in performance that we promised.

Turn to slide 17. Taking together the dynamics in our business - attractive medium-term growth from Vaccines and Specialty Medicines, increasing contributions from our late-stage pipeline assets and our very manageable LoE exposure - we are very confident in our ability to deliver our long-term sales ambitions.

And I remind you that this sales ambition doesn't include the benefit of our developing early-stage pipeline or business development for which we have now increased capacity following our demerger.

We expect GSK to be a growth company, not just for the medium term, but through this decade and beyond.

Turn to slide 18. And how we deliver this growth matters deeply to us. At GSK, we continue to be guided by our purpose to unite science, technology, and talent to get ahead of disease together.

Integral to this is running a responsible business, which builds trust and reduces risk for sustainable health impact, shareholder returns, and supporting our people to thrive.

We've prioritized our resources to focus on the six material areas depicted here. And as I mentioned earlier, our leadership and progress in access to medicines and sustainability have been recognized in external rankings.

Over the next decade, we will deliver health impact sustainably and at scale with an ambition to positively impact the lives of 2.5 billion people.

Turn to the last slide 19. To summarize, as we enter 2023, GSK is a focused global biopharma company that is ambitious for patients and its people and has a unique strategy based on the prevention and treatment of disease.

We have compelling prospects as a world leader in Infectious Diseases with an exciting late-stage portfolio of vaccines, anti-infectives, and specialty medicines, and an emerging pipeline based on the science of the immune system.

We are delivering a step change in performance and growth.

Most importantly, we are very confident that we will sustain growth through the decade and beyond to deliver human health impact at scale. We have a very exciting future ahead of us together.

With that, I'm going to ask my colleagues, Ian, Tony, Luke, Deborah and David, to join me up here, James, and we'll move to Q&A. Thank you very much.

[applause]

James: Just as a reminder while people are taking their seats. This is a Q&A where you can ask questions in a couple of ways, you can register our questions through the website and I can read out your questions. Also, if you're in the room and you want to raise your hand, as long as I can see you we'll get a mic in front of you. Maybe, Emma, do you want to introduce who's up on the stage with you?

Emma: This is the dream team in the industry! I'll go from my left: David Redfern, who leads our Corporate Development and also Chairs Dave. Tony Wood, our Chief Scientific Officer leads our R&D. Luke Miels, Chief Commercial Officer; Deborah Waterhouse, CEO of ViiV, our HIV business, and Iain MacKay, Chief Financial Officer.

James: Great. Thanks very much. Does anyone have a question they'd like to start with? In that case, I'll go to the first question I had which was just in terms of the priorities within the pipeline from a therapeutic perspective. Oncology seem to be listed towards the end in terms of focus areas. Can you talk about where the focus is now? Is Oncology going to be a big part of GSK going forward or is it less of a story now and more of the future story is going to be anti-infectives?

Emma: Maybe I'll start answering that, then perhaps Tony, you can pick up on what we think about allocating capital, both organically and inorganically?

When we laid out the strategy for change at GSK to drive this transition into being a growth and a profitable growth company again, a big part of that was reinvesting in R&D and driving a shift in the portfolio.

For that, we said we wanted to move away from being more of a general medicines business to really prioritizing Specialty Medicines and Vaccines. That has already been a big shift in 2018. Specialty Medicine and Vaccines were 44% of our business. They're now at two-thirds. We'll get to them being three-quarters. It's important for the economic mix. It's also where a lot of innovation and new technology platforms are coming through.

Within Specialty Medicines, we've consistently said that there are four key therapy areas, and that's in infectious diseases, HIV, which is, of course a big business for us, and the key infectious disease, and then immunology, respiratory and oncology.

Now in our pipeline, two-third of it today is in infectious diseases and HIV. It would be fair to say that's where our priority is, but we remain extremely committed to these other areas of our specialty portfolio and are excited about some of the things that are coming through.

It would be fair to say that in share of voice, and both the actual size of the business today and contribution to growth, it's a bit smaller, but some exciting things happening, both inorganically in terms of our progress.

In oncology, we've got Ruby coming through organically, but also inorganically when we've the launch of momelotinib, for example. A great deal that was done there in oncology. Tony, do you want to talk a bit about how you see allocation of R&D resources?

Tony Wood: Yes. Perhaps, I'll start by emphasizing that our focus remains across the core four therapeutic areas that Emma described. We have at the R&D business, the integration of

everything from vaccines and including medicines.

Capital allocation across that portfolio is really driven by where we see the opportunity to make a meaningful difference to standard of care. That occurs at a late-stage portfolio meeting that Luke and I both co-chair. What you see in the evolution of the portfolio that Emma described, is the consequences of that data-driven decision process.

Underpinning that of course, we have our technology platforms and investments there. Fundamentally, we're looking to allocate capital in a way that can best deliver a meaningful difference in standard of care.

James: Thank you. Maybe, one of the products you mentioned, was you filed your older adult RSV vaccine. You're not the only company going after older adult RSV. How are you thinking about the competitive set up? Why will someone use the GSK product versus a competitor product?

Maybe, if someone could also talk about duration of protection, is this going to be a job where you have to get jumped every year, or could this be a product which gives you longer protection?

Emma: Again, there are two aspects to that. One is there's a huge amount of unmet need. I'd like Tony to talk about the comprehensive data package that we have. Then perhaps, Luke, you can talk appropriately since it is a competitive situation about how we see the market prospects and our excitement and ambitions there.

In the end, in all my experience, having more than one player is rarely a bad thing, especially when you're creating a new market and especially when you have a stronger data package like we believe we do, and we look forward to continuing to generate, but maybe, you can talk about...

[crosstalk]

Tony: Let me just begin by reiterating the strength of the package, particularly in the context of those most at risk. 94% vaccine efficacy in those with comorbidities and in the above 70 age group, looking across the broader population above 60 vaccine efficacy in excess of 80% in both the A and B strains.

Early data suggests that flu occurs without deleterious effect on either administered vaccine and immunological data suggesting that we should see protection into a second season. Obviously,

we're waiting on vaccine efficacy data to substantiate that, and we're very hopeful that we'll be able to bring that second season data as part of our June ACIP presentation.

Emma: Luke, anything?

Luke: As Emma said, the presence of two companies is likely to drive rapid expansion and adoption. The initial usage of these vaccines is going to be propelled by high-risk individuals. We've done a lot of market research on the known profile of the competitor as well as ours.

When you move beyond the basic headlines in the aggregate groups and look at high-risk subgroups, physicians see a distinct difference between these two vaccines. To Tony's point, the biggest variable at this point is ultimately going to be coverage in the second year. I will have that ideally before we actually go through the final ASIP process in June of this year.

Again, the presence of the adjuvant gives us some encouragement there. Competitively, we've indicated that we think the pricing range is going to be somewhere between high dose flu and *Shingrix*.

Then, finally, we're very comfortable competing with the other company. We compete with them in the meningitis B area. We get three-fourths of those patients in the US. We're very much looking forward to the competitive and scientific exchange.

Emma: The only other thing I'd add on ours is that we are seeing what the world has experienced in the last few years, just this huge emergence of exciting vaccine technology, but also recognition particularly for older people...Vaccination is no longer something that's just for babies.

Every government family business recognizes that prevention is cheaper and better than treatment. Anything we can do to keep people out. You are hearing much more noise about RSV. Of course, the IRA has removed co-pay for older readouts as well, which is a great move forward, and hopefully will reduce one of those barriers to access that was being talked about earlier.

James: Thank you very much. A couple of audience questions here. One is on RSV. There's two parts to the question: one is, what are your thoughts on the two billion number as peak sales opportunity that Pfizer has put out? The second part of the question is, where would revenues peak in the US? Then where would incremental grow from? How are you thinking about ex-US?

Emma: Luke, do you want to talk about it?

Luke: Sure. I missed your second question. Was it...?

James: When would the product peak in the US? I'll ask about US uptake, and then what about ex-US? And how are you thinking about the ex-US on to?

Luke: Peak in the US is at least a decade away. If you look at classical penetration of vaccines and adult populations in the US before cover about two-thirds of adults had a regular vaccination.

Tony: Primarily flu. To Emma's point, COVID has raised the awareness of people who historically may have had cardio metabolic complications who would not naturally connect that to a respiratory risk. COVID has now made those people more aware of the consequences of an infection with a respiratory pathogen.

That is going to drive multi-year growth at least a decade of continuing penetration. Of course, the cohort is replenished each year as people age.

In terms of ex-US, if you look at what we've done across the portfolio, particularly with *Shingrix*, we're now reporting 40 percent of our revenue as ex-US with a very tight pricing corridor. There is a sizable opportunity for RSV outside of the US and we intend to fully develop that.

James: Thank you. Another question here. The question is, what does hidden-in-plain-sight mean in terms of the size of an acquisition and the top and bottom-line accretion? Maybe, they're talking about recent comments about the sort of deals that GSK were looking for?

Emma: I'm sorry. The sound in here is not very easy to pick up. It's a question on BD?

James: Yeah. The question is, what does hidden-in-plain-sight mean in terms of the size and EPS accretion?

Emma: That was your interview. [inaudible] .

[laughter]

Emma: What do you mean?

Tony: It's probably an Australian prodigal song. Essentially, that's something that is, as it suggests, in plain sight but necessarily overlooked, the example of the acquisition of Sierra Oncology.

You had a validated mechanism. You had a distinct unmet need in terms of patients who are suffering myelofibrosis, a clear understanding in terms of the correlation between anemia and the infusion, and life expectancy and a product in the form of ruxolitinib that actually made that worse.

Sierra Oncology was there at a reasonable price with a validated mechanism prepared for filing. That, to me, was hidden-in-plain-sight.

People have seen the deal documents. We were able to execute that transaction very quickly. That's the type of transaction that we mean by plain sight.

Tebipenem is another one, small-scale transaction, a clear pathway to approval. There were some challenges from the FDA.

The market cap of that company collapsed, we are able to pick up a Phase III asset at a very attractive price and collaborate with an excellent company to hopefully bring that to patients.

James: Thank you. I've also had a question about HIV.

Maybe, this is one for Deborah. It could be interesting, which is, what are the next things that you're going to be doing with injectables? You've talked about the current launches going well. But what could you take forward next year? What are you most excited about?

Emma: Go ahead.

Deborah Waterhouse: If I think about how we believe our pipeline is going to unfold, we're going to build on the quite phenomenal innovation that we've delivered over the last few years. The pipeline is mainly focused on long-acting injectables, and it's really focused on patient unmet need.

What people living with HIV are telling us, or those who are at risk of acquiring HIV is that they would like a self-injectable.

Actually, they love long-acting, but they really don't want to have to go into a physician's office to

get that medicine and the longest gap possible between administration. We've got two waves of innovation that we will be working through over the coming years.

The next wave is based on cabotegravir. Everything we do is based around an integrated inhibitor, because the high barrier to resistance makes us believe that medicine has to be at the heart of what we do, both in terms of prevention and treatment.

We've got cabotegravir, and then we will add to cabotegravir either a broadly neutralizing antibody, a capsid, a different formulation of rilpivirine or a maturation inhibitor. We're working our way through the clinical data that will help us select for the self-administered and the ultra-long-acting and the next generation of prevention from that selection of medicines.

By the middle of '24, we'll have the clinical data that tells us what we need to take into Phase 3 to meet those target medicine profiles. The really important thing to remember is though, that's not where we're stopping.

We have a third-generation integrated inhibitor, which we have in-licensed from Shionogi, our long-term partner. We partnered with them on dolutegravir, cabotegravir, and now the third generation. That has ultra-long-acting properties, six months plus probably.

Again, we'll work on this medicine, and we'll look at the partner options that we have. That will then take us through the end of the decade, all the way to 2040. That will obviously also be at the heart of our prevention endeavor.

What you're going to see is us taking innovation to the next level, constantly with people living with HIV in mind, and that will see us through the loss of exclusivity of dolutegravir. When we did our business investor update in June, none of this pipeline was factored into the evolution of GSK's growth.

Still, we could grow through the loss of exclusivity of dolutegravir. Now what we've got is within ViiV an opportunity with our pipeline to actually replace the revenue that we will lose with dolutegravir when it loses exclusivity. That will be replaced in large part by the new pipeline that's coming through.

Our confidence grows every day as we see really compelling clinical data, some of which we've shared in the past, and some of which will be shared this year and early next year, so a really great opportunity.

Emma: This is a profoundly important point for people to understand. First of all, dolutegravir itself, through the transition of the portfolio that Deborah's leading is going to be by the time it comes off patent, which we've given outlooks to '26.

It's not like something happens in '26. It's more towards the end of the decade and then it's in mid-single digits. We have this really exciting emerging optionality on several new assets coming through. We have such a strong track record of pioneering successfully in our innovation in HIV.

There are lots of reasons to be watching this carefully together over the next 18 months or so.

James: Thank you. I've also been asked to ask about Shingrix. Clearly, lots of growth at the moment. You said record sales, but how much longer is it going to be a big growth driver? Are you going to run out of people to vaccinate in the US?

Emma: There are a lot of people over 50 in the world. We've got this gift that will keep on giving. Isn't it?

Tony: Absolutely. There may actually be some people here over 50. If you look historically at Zostavax, they've vaccinated 22 million Americans in 10 years. We've achieved 23 million with two doses, 33 million with one dose. There's several years of growth left.

I mentioned earlier in terms of expansion beyond the US, that expansion initially has been driven by countries like Germany. We don't have full market access in all the European countries. We expect to achieve that over the next couple of years.

We have early penetration in Japan that has a significant time to run. Then, of course, with China right now, we're available in a couple of hundred cities. As you can imagine, that's not a priority for the healthcare system, we would expect to re-engage in that process.

Then, finally, you've got emerging markets. You need to think of this as three distinct stages. First stage is the US and Europe. Then the second stage is really negotiating with governments in those types of markets to expand beyond that.

Then the final phase is in emerging markets. The final point is that we look at activity extending out to 10 years. There will be a point at which it makes sense to re-challenge those patients to boost them. As you can imagine, that's an opportunity that we're seeking to explore in the future.

James: Thank you. One other question I've received about vaccines is competition for mRNA vaccines. How are you thinking about that in terms of *Shingrix*? Also, what about for RSV - is that a significant threat for your RSV program?

Emma: Tony, perhaps you can talk about that. As I said in my presentation, mRNA is a very important platform. *Shingrix* has 10 years of efficacy data and over 90% efficacy. That's hard to catch up on. We do believe there is going to be a place for mRNA in respiratory.

Let's see beyond that as well. Obviously, there's some emerging data coming through in other diseases we watch carefully, but we're excited to be making progress in mRNA. Do you want to pick up on how you see that and our options there?

Tony: Yes. I'm encouraged with the Phase I data we're seeing in our CureVac collaboration, both with regards to COVID and flu, expect to be able to move both of those programs into multivalent Phase II studies in the middle of this year.

I'm looking forward to seeing progress across that front, and we'll be able to present more data on the Phase I readouts later around this quarter.

Emma: Obviously, in RSV, as we said earlier, we're looking forward hopefully, to having our two-year data. Then, a third year will follow after that in terms of duration of protection, which is obviously something when you look at relative technologies particularly in respiratory disease.

We've got a good track record on with our adjuvant technology.

Tony: It's worth just re-emphasizing the 94% vaccine efficacy and the at-risk populations for RSV.

James: Great. Thank you very much. We're just about out of time. I'm looking forward to this RSV data and later recommendation. Thanks very much, everyone. Thanks for joining.

Emma: Thank you everybody.

[applause]



*Webcasting and transcription services
provided through MAP Digital, Inc.*