



Annual General Meeting
Roche Holding Ltd
5 March 2019

Address by Severin Schwan
CEO of the Roche Group

(Check against delivery.)

Shareholders, ladies and gentlemen

I too would like to welcome you to this year's Annual General Meeting.

We gave a detailed briefing on our full-year performance at our press conference on 31 January, when we also published our Annual Report on the internet.

Let me start by summarising the key results for 2018, after which I will talk at greater length about our new influenza medicine and its benefits for patients.

Now to my first topic.

Last year, your company made significant progress at all levels – strategic, operational and financial.

Thanks, in particular, to the successful launch of new, innovative products in both our Pharmaceuticals and Diagnostics Divisions, we can look back on an extremely good result.

2018 full-year results

2018: Very good full-year result				
<i>Targets fully achieved</i>				
In CHF bn	2018	2017	CER ¹	CHF
Sales	56.8	53.3	+ 7%	+ 7%
- Pharmaceuticals	44.0	41.2	+ 7%	+ 7%
- Diagnostics	12.9	12.1	+ 7%	+ 7%
Net income (IFRS)	10.9	8.8	+24%	+23%
Core earnings per share (CHF)	18.14	15.34	+19%	+18%

¹ CER: constant exchange rates.

We achieved the targets we set ourselves for 2018, and even surpassed them in some cases:

- Group sales rose by 7%, both in Swiss francs and at constant exchange rates.
- Pharmaceuticals Division sales increased by 7%. This strong growth was driven primarily by our new medicines for certain types of cancer, multiple sclerosis and haemophilia.

- The Diagnostics Division's sales also grew 7%, significantly faster than the market. A crucial source of impetus for the division proved (once again) to be the immunodiagnostics business which, thanks to newly launched diagnostics platforms, posted double-digit growth.
- At constant exchange rates, net income rose significantly to almost 11 billion Swiss francs, an increase of 24%.
- Core earnings per share rose by 19%. This is partly due to the effects of the tax reform in the USA. Factoring out this effect, core earnings per share rose by 8%, which is still slightly ahead of sales.

We also made significant progress with digitalisation, the use of data from medical practice and the application of cutting-edge data analysis techniques. This will support our product development activities and drive forward personalised medicine.

What is the financial outlook for 2019?

Outlook

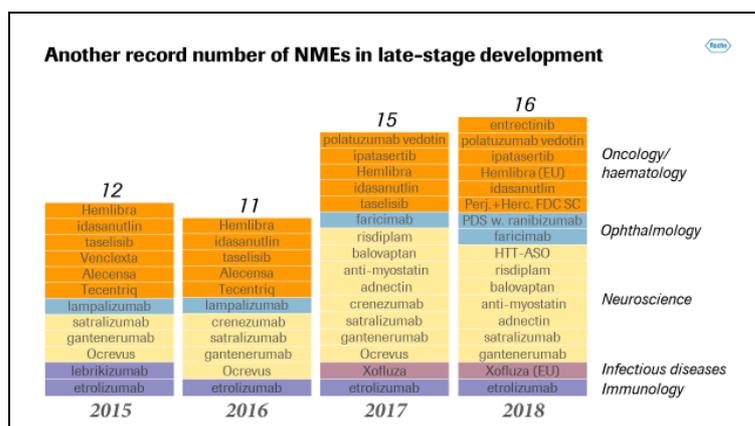
Outlook for 2019	
Group sales growth¹	Low to mid-single digit
Core EPS growth¹	Broadly in line with sales
Dividend outlook	Further dividend increase in Swiss francs

¹At constant exchange rates.

Owing to its successful market launches and strong product pipeline, Roche is well placed to achieve further growth.

We expect to see low to mid-single digit sales growth (at constant exchange rates) in 2019. We assume that core earnings per share will grow broadly in line with sales and that, as such, we will be able to increase the dividend once more.

Product pipeline



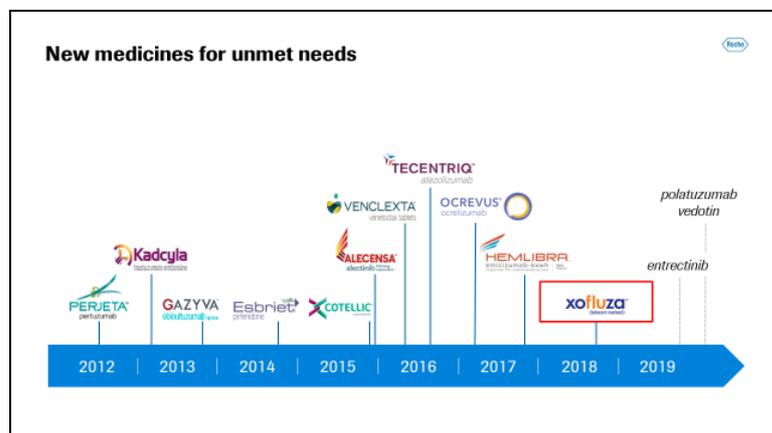
Genuine innovations are key to the continuing success of our company. However, since human biology is immensely complex, innovative research is not something that can be “timetabled”. This makes the strong performance of our product pipeline all the more gratifying. We currently have 16 new molecular entities in late-phase clinical development – a new record for Roche.

Oncology remains a key area of focus. However, we are also venturing into new areas such as ophthalmology, immunology and diseases of the central nervous system, where we are expecting promising data, and hence growth, further down the line.

Unfortunately we had to halt development of one drug substance – crenezumab – early this year, because it was ineffective in its intended indication of Alzheimer's disease, an area where there is huge medical need. Alzheimer's is an extremely challenging condition to combat. The disease progresses very slowly, which means that researchers have to wait a long time before they can assess the effectiveness of new drug candidates. The important thing here is to be able to learn from setbacks as well. We currently have other drug substances for Alzheimer's in development, and hope to make a breakthrough one day.

Science will continue to advance at an ever-faster pace, and this will help us continue to bring groundbreaking innovations to market, just as we have done in the recent past.

New medicines for unmet needs



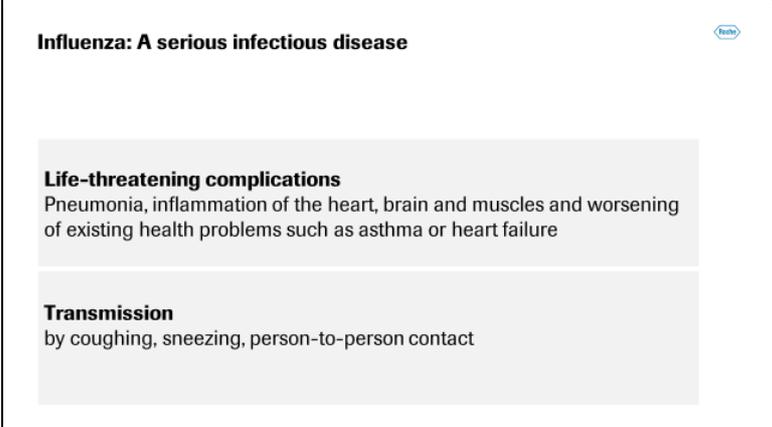
As you can see here, we have launched seven new innovative medicines that deliver tangible added value for doctors and patients in the last three years – in other words, in a very short time.

The success story goes on. Just a few weeks ago, the FDA granted Breakthrough Therapy Designation to two of our new molecular entities, giving them the go-ahead for expedited processing of their regulatory dossiers. They are polatuzumab vedotin for the treatment of a certain form of leukaemia, and entrectinib for a specific form of lung cancer.

Last October, the FDA approved our novel influenza medicine Xofluza, the latest of our new medicines.

And this brings me to the **second topic** of my speech.

Influenza



Influenza: A serious infectious disease

Life-threatening complications
Pneumonia, inflammation of the heart, brain and muscles and worsening of existing health problems such as asthma or heart failure

Transmission
by coughing, sneezing, person-to-person contact

Influenza is a serious and frequently underestimated infectious disease. It can cause life-threatening complications such as pneumonia, inflammation of the heart, brain and muscles and exacerbate existing problems such as asthma and heart failure. Each year, one in ten people worldwide contract influenza.

Much is said and written about influenza. In fact, the subject is wheeled out with a certain monotonous regularity each year when the **seasonal outbreak** occurs.

You could be forgiven for thinking that such a common disease must have been adequately researched from all angles. Some people wonder why we are not able to eradicate influenza once and for all, just as we did with smallpox¹, one of the deadliest infectious diseases ever and one that hundreds of thousands of people still died of up to the mid-20th century.

It is a sad fact, though, that we will probably never be able to eradicate influenza. Flu viruses are cunning and among the “most talented quick-change artists” in the viral world. Because they are constantly mutating, they are able to outwit our immune systems time and time again.

As a result, not only are slightly modified versions of the virus constantly appearing, but every so often completely new and aggressive influenza viruses, to which a large part of the population is

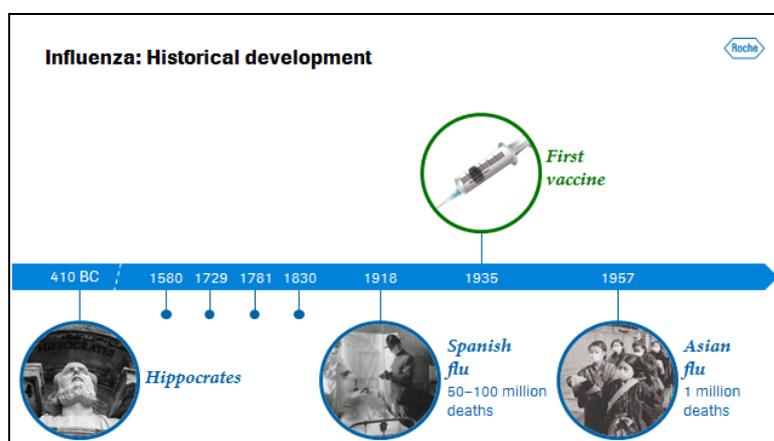
¹ The WHO declared that the disease had been eradicated in 1980.

not immune, also emerge.

This is when there is a risk of the disease spreading throughout the world and becoming a **pandemic**.

The influenza virus's incredible ability to mutate explains why it is so difficult to combat the disease, even though it has been known for some 2,000 years.

It is interesting to take a look at the virus's medical history.



As long ago as 410 BC, the physician Hippocrates described a disease with symptoms that we would now attribute to influenza.

The earliest known pandemic was the influenza outbreak of 1580. Since then, the disease has made regular appearances in the history books – the well-documented outbreaks are shown here. However, it is believed that there have been at least 30 pandemics in the past 500 years.

Exactly one hundred years ago, in 1918/19, what became known as Spanish flu spread rapidly around the world in several waves. According to estimates, between 50 and 100 million people (mostly young men) died, often in just a few days, or even hours. The pandemic claimed more lives than both World Wars together.

Switzerland was not spared either. One million people contracted the disease; around 25,000 did not survive it.

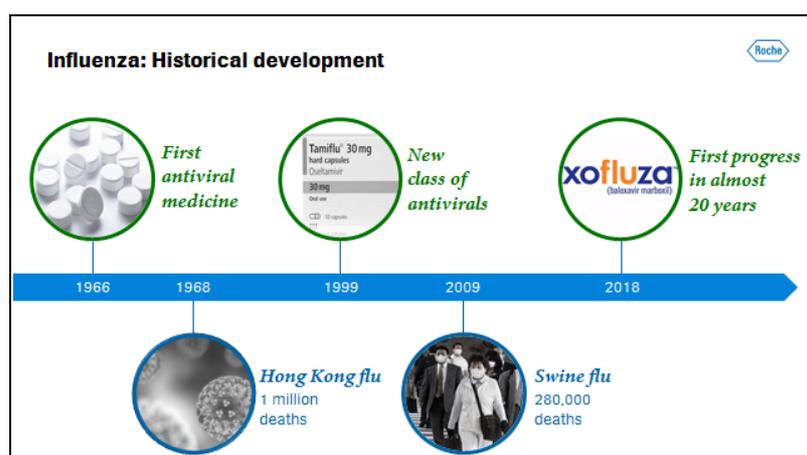
Back then, doctors and scientists worked flat out to discover a remedy for this scourge.

However, it was not until the 1930s that American scientists were successful in developing an influenza vaccine.

Even now, annual vaccination is a very important way of protecting against seasonal influenza. But its efficacy is limited, varying between 40 and 60%, depending on the year, and due to the virus's ability to mutate.

The next influenza pandemic, the Asian flu pandemic, occurred in 1957. It is estimated to have claimed a million victims.

At least another 30 years were to pass following the development of the first vaccine until the development of the first antiviral medicine in 1966. The medicine in question, amantadine, is very rarely used these days because it causes severe side effects, and many people have become resistant to it.



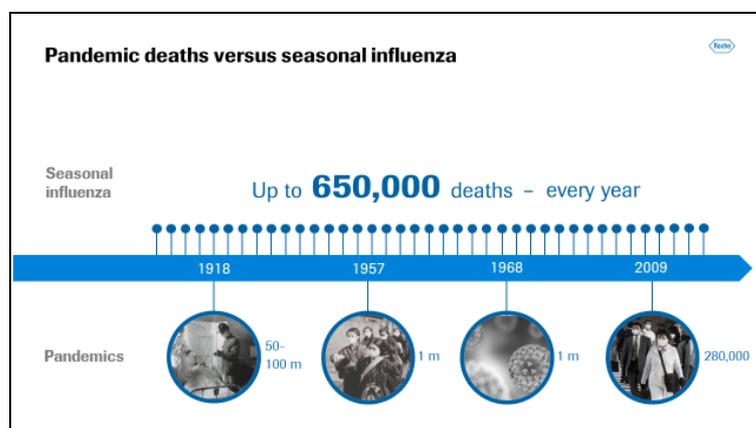
Despite this first success, the Hong Kong flu caused another million fatalities two years later (1968).

In 1999, Roche achieved a medical breakthrough with Tamiflu. Tamiflu was the first medicine in a new class of antivirals (and has since been used successfully in millions of patients worldwide).

Ten years later, in 2009, the so-called swine flu went round the world, costing an estimated 280,000 people their lives.²

Scientists at Roche and other companies sought in vain for almost 20 years to develop another medicine after Tamiflu that would be effective against influenza. It wasn't until last year that we succeeded in launching **Xofluza** – in partnership with the Japanese research company Shionogi.

Xofluza is not only the first influenza medicine with a new mechanism of action in 20 years, it is also the first antiviral to be launched in the 21st century.



As we have just seen, the major pandemics of the 20th century claimed the lives of millions of victims.

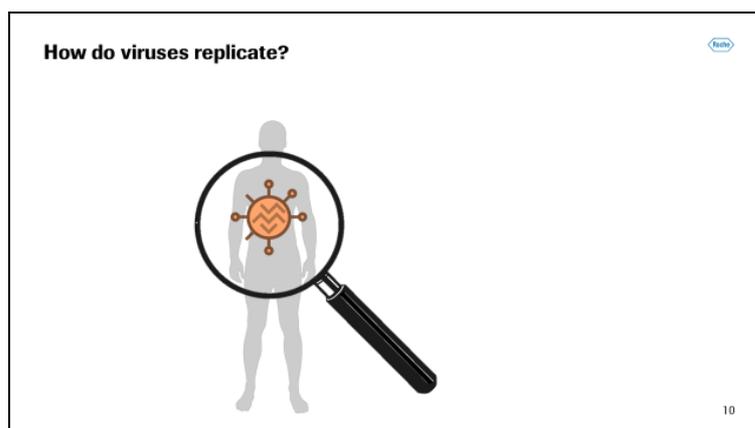
² According to an extensive survey by the prestigious medical journal *The Lancet*, it is estimated to have cost between 150,000 and 570,000 people their lives; if we assume 280,000 (as shown here), then we are somewhere in the middle of this estimate.

However, it is a little one-sided just to focus on pandemics. According to new estimates by the World Health Organization (WHO), the US Centers for Disease Control and Prevention (CDC), and global health partners, the supposedly “harmless” seasonal influenza causes up to 650,000 deaths. Every year.

And does so despite annual influenza vaccinations. The need for new antivirals is obvious.

So how does **Xofluza** work and what makes it so special?

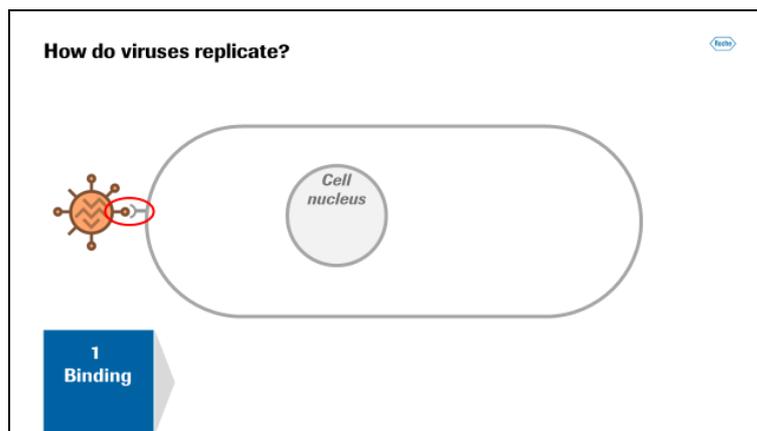
To answer this, we need to go down to the molecular level.



Viruses cannot replicate by themselves; they need a host.

Let's take a closer look at what happens once a virus has entered the human body.

The entire process takes place in **four phases**.

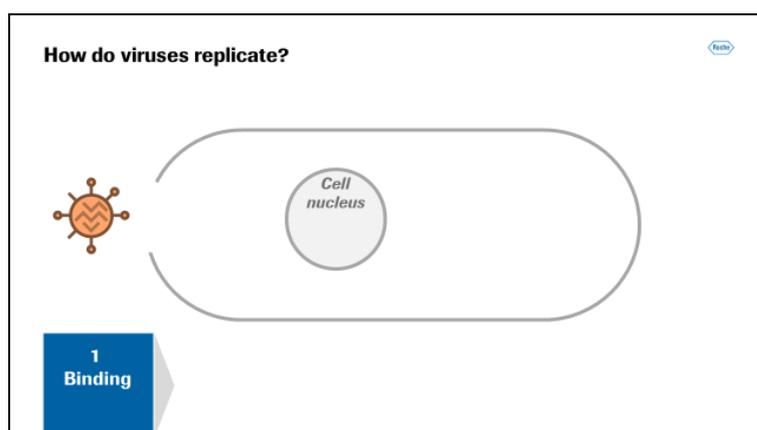


First the viruses encounter various cells. All cells have a nucleus and an outer shell with specific proteins that are known as receptors. These receptors vary in appearance, depending on the type of cell they are associated with, e.g. lung cells or skin cells.

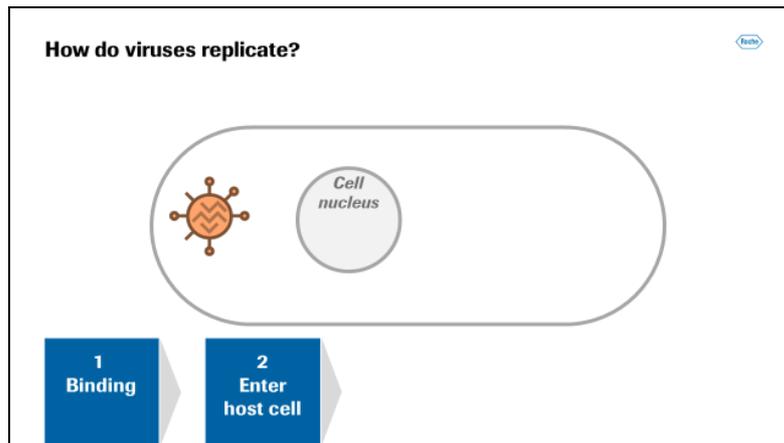
If a virus encounters a cell and the proteins on the virus's surface are an exact fit, like a key in a lock, for the cell's receptors, the virus can then bind to the cell.

Thus the influenza virus's "key" will not fit a skin cell, for example, but it will fit a lung cell.

This is the **first phase**.

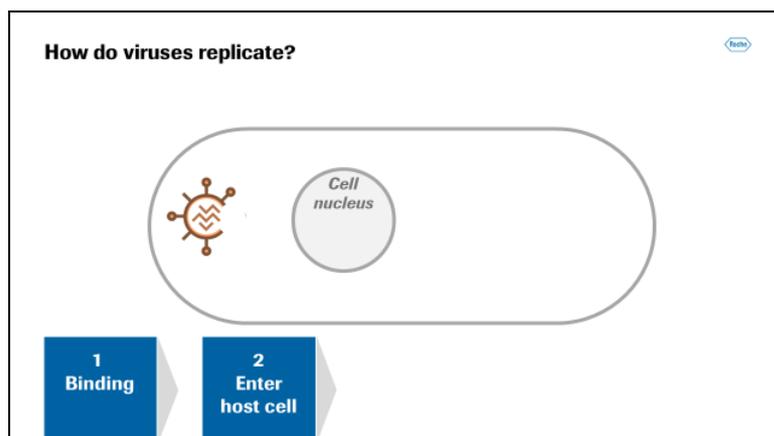


For a short time, the binding process opens a "door" in the human cell's outer membrane...

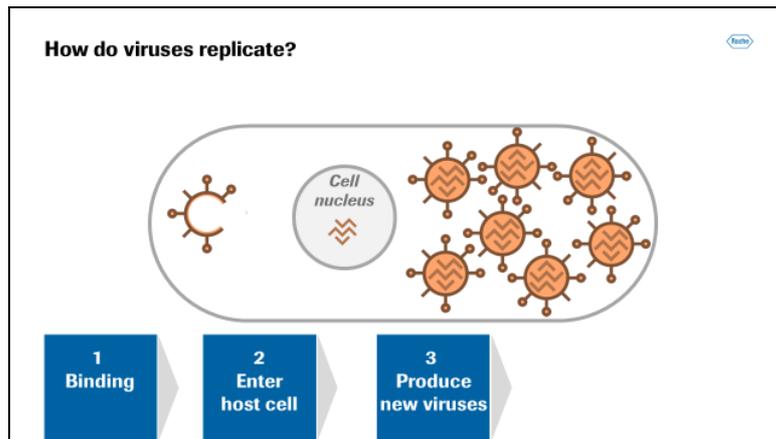


...and the virus can enter the cell. The cell has now become the virus's host cell.

This is the **second phase**.

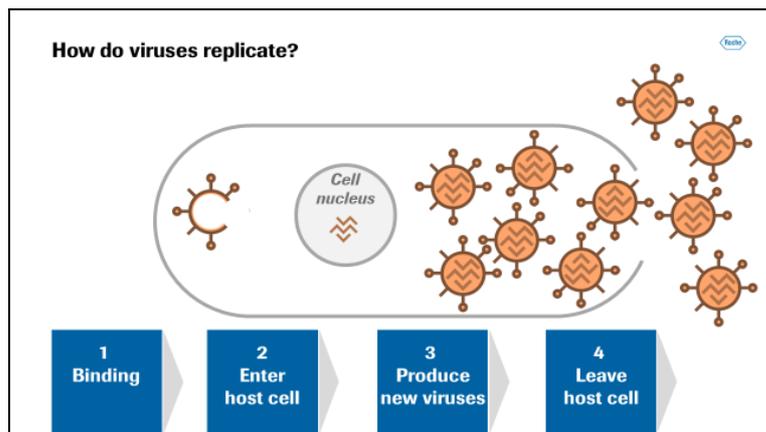


Now the virus introduces its genetic material into the host cell, starting the process of reprogramming the cell. The host cell is no longer able to fulfil its original purpose, instead becoming ...



... a “production line” (or “mini-factory”) for new viruses. Within just a few hours, thousands of new viruses have formed.

This is the **third phase**.

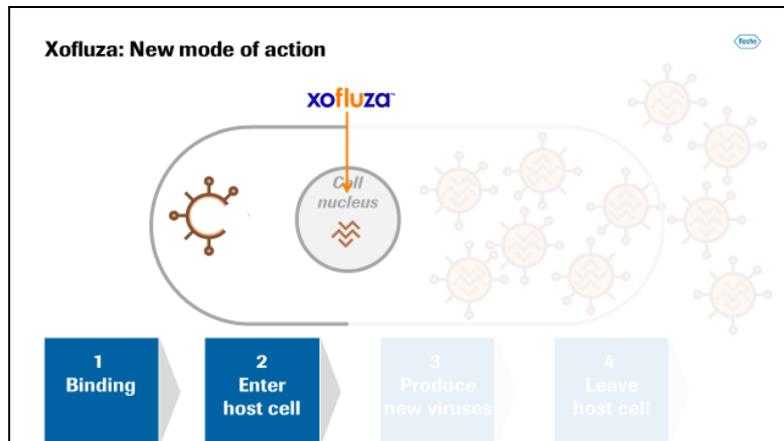


These new viruses now leave the cell, again using specific “keys” (proteins) on their surfaces to unlock the cell for a short time.

This is the **fourth (and final) phase**.

The host cell dies off. Thousands of new viruses now attack other cells, turning them into their hosts. In a very short space of time, millions of viruses are created.

So how does **Xofluza**, our new influenza medicine, work?

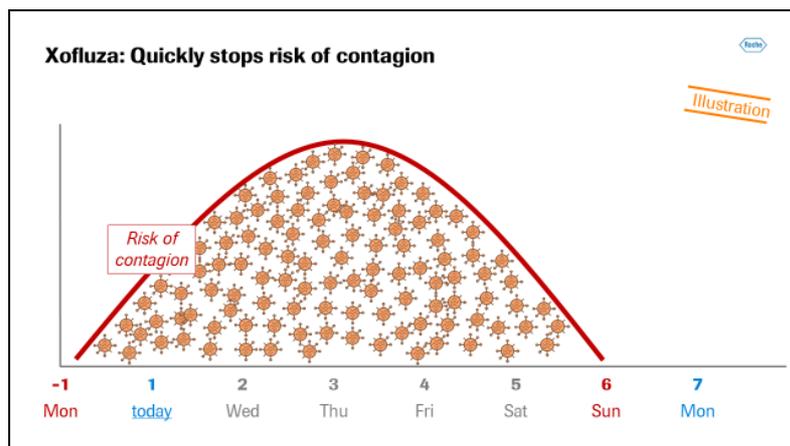


Xofluza intervenes in the process (the virus's life cycle) very much sooner than previously available medicines.

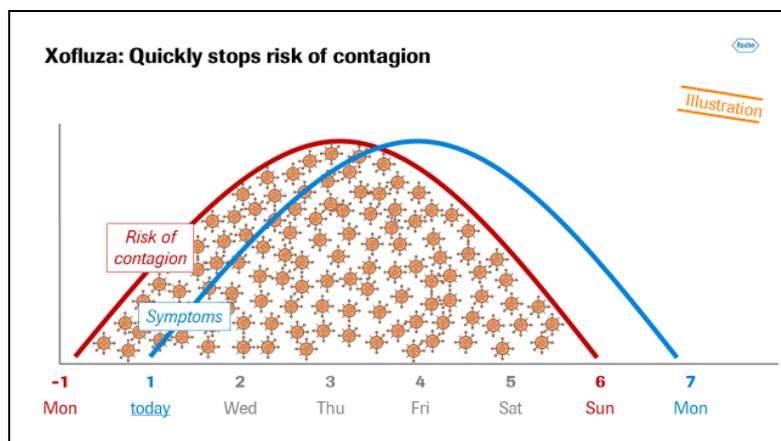
It prevents viruses from being formed at all: it prevents the cells from being reprogrammed and misused.

Xofluza not only reduces the duration of sickness, it also shortens the length of time for which patients are contagious.

Let's look at this more closely, starting with the risk of contagion:



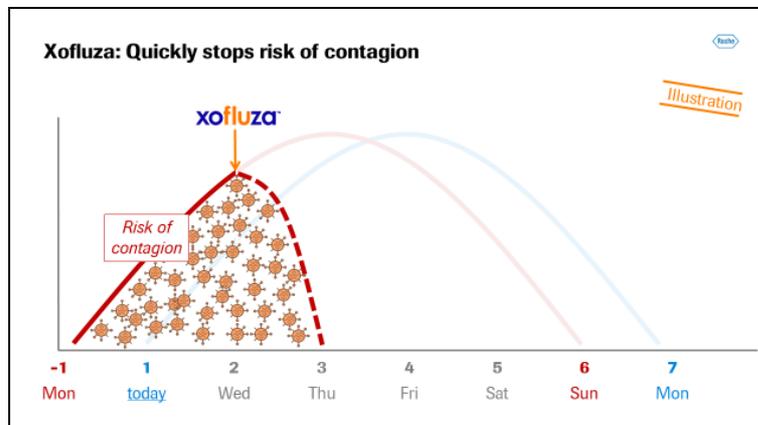
- Let's assume that I became infected yesterday (on Monday).
- So I still feel fine this morning. However, I'm already carrying the viruses around with me and unfortunately I'm unwittingly transmitting them to other people.
- Until this coming Sunday I'll still be infectious – and passing the flu viruses on to everyone around me.



So what do the symptoms of the illness look like?

- As mentioned, I was infected yesterday.
- Only today do I start to experience the symptoms, generally a sudden high temperature, shivering, coughing, limb pain, etc.
- By next Monday (but no sooner) I should be feeling better again.

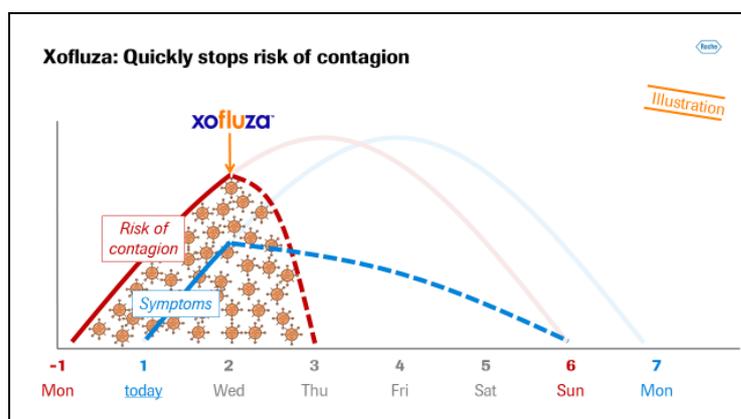
(Though influenza can vary from person to person; the course of the illness depends heavily on the person's immune system.)



So what happens if I take Xofluza, our new antiviral medicine?

- Xofluza should be taken within 48 hours of the onset of symptoms. So I'll take the medicine tomorrow, Wednesday.
- After just one (!) day (i.e. on Thursday) I will no longer pose a risk of contagion.

This is the big difference between Xofluza and other medicines like Tamiflu, where the risk of contagion lasts significantly longer. Added to which, Xofluza only has to be taken once, and not over several days.



What's more, with Xofluza I start feeling better again sooner than I would have done without it.

Ladies and Gentlemen,

Thanks to its special mode of action, taking Xofluza has three positive effects:

- Firstly, for the affected patient themselves: Xofluza not only shortens the duration of influenza symptoms, even more importantly, it can prevent the serious complications mentioned earlier such as pneumonia, which – especially in at-risk groups, can lead to death.
- Secondly, the viral spread is stopped in its tracks. You might still feel poorly, but you are contagious for three days less. What this means in concrete terms is that, when a seasonal bout of influenza strikes, the potential risk of contagion for third parties, especially at-risk groups such as the elderly, pregnant women or young children, is significantly reduced too.
- Lastly, the risk of pandemic is diminished. As we all know, a flu virus travels very fast, especially in this day and age, needing only a few hours to spread across continents from one airport to another. Despite state-of-the-art precautions, the risk of a worldwide pandemic has increased owing to the increase in international travel.

Now I'd like to show you a short film: Mr Lin was a US Navy Commander, and the father of a young son. We spoke to him, and he is happy for us to show you this film. He feels it is very important that more people understand just how dangerous influenza can be.

(Video)

Ladies and gentlemen,

I am sure we are all shocked that a perfectly fit boy could still die of influenza today (and in just a matter of days too). Unfortunately this isn't just an isolated case.

And yet in Europe especially, influenza tends to be played down. But there's no reason for that, even in a country with a good health system like Switzerland: According to the Swiss Federal

Office of Public Health, an estimated 1,500 people die in Switzerland each year as a result of influenza.

In 2015, the figure was as high as 2,500. Ten times more people died of influenza than due to road accidents (260).

A little while ago I was asked why people underestimate influenza so much. The analogy that occurred to me fits quite well: Maybe it's like driving a car. If you drive your car without putting your seatbelt on, there's a very high probability that you will survive the journey. But we all agree that it's a good idea to put our seatbelt on ... and it's similar with influenza. It's unlikely that you, as an individual, will die of it. But that doesn't alter the fact that a lot of patients would survive if we treated the disease much earlier.

Ladies and gentlemen,

I am proud of the medical progress that we achieved in 2018, and not only in treating influenza. Allow me also to express my sincere thanks to our employees – over 90,000 in total – without whose dedication this success would not have been possible.

And I would like to thank you, our shareholders, for the trust you have placed in our company.

Thank you very much.

This speech/presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as 'believes', 'expects', 'anticipates', 'projects', 'intends', 'should', 'seeks', 'estimates', 'future' or similar expressions or by discussion of, among other things, strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation, among others:

- 1 pricing and product initiatives of competitors;
- 2 legislative and regulatory developments and economic conditions;
- 3 delay or inability in obtaining regulatory approvals or bringing products to market;
- 4 fluctuations in currency exchange rates and general financial market conditions;
- 5 uncertainties in the discovery, development or marketing of new products or new uses of existing products, including without limitation negative results of clinical trials or research projects, unexpected side-effects of pipeline or marketed products;
- 6 increased government pricing pressures;
- 7 interruptions in production;
- 8 loss of or inability to obtain adequate protection for intellectual property rights;
- 9 litigation;
- 10 loss of key executives or other employees; and
- 11 adverse publicity and news coverage.

Any statements regarding earnings per share growth is not a profit forecast and should not be interpreted to mean that Roche's earnings or earnings per share for this year or any subsequent period will necessarily match or exceed the historical published earnings or earnings per share of Roche.

For marketed products discussed in this presentation, please see full prescribing information on our website www.roche.com

All mentioned trademarks are legally protected.