

Alexander Gregoriev, Co-founder of PIROGOV.AI
“Artificial Intelligence Diagnostics & Clinical Decision Support System”

PIROGOV.AI is an artificial intelligence diagnostics and clinical decision support system. PIROGOV.AI helps to diagnose Ear, Nose, and Throat conditions using digital endoscope photo and video, with an accuracy of 95%. The problem that they solve is diagnostic accuracy in ENT which depends on human factors. The recent research done in the United States shows that at least each fourth diagnosis in ENT is determined incorrectly.

[Our Solution]

Our solution enables us to do an accurate diagnosis on the first try with an accuracy of about 95%. This reduces the patient treatment period, losses from temporary disability, and of course improves quality of medical care. The clinics and doctors providing this health care are getting positive feedback from the patients. Our solution can be used not only by ENT specialists, but also by general practitioners like therapists, pediatricians, and family doctors. As well as this, our software can work with different kinds of equipment, including portable ones. It can be connected to a notebook as well. So the doctor can do diagnostics, not only in clinics, but during their visit to the patient. Our solution could be integrated with the patient's electronic health record (EHR) and used for quality control issues and telemedicine scenarios.

[How does it work?]

The doctor or patient takes a photo of an ear drum, loads it to the system, and receives probable diagnosis. Ear diseases are one of the most present and about 6% of the population suffers them each year. So it's about half a billion people globally. And extrapolating the same statistics to the population of Japan, it gives us about 8 million patients annually.

[Marketing]

We have a working solution already implemented in 4 private clinics in Russia. We have a partnership agreement with Russian endoscopic equipment manufacturers and are in negotiations with telemedicine service providers. We have competitors in Canada, the United States and South Korea. Compared to those, our solution has high accuracy and competitive pricing. To enable such high accuracy, we used over 12,000 clinical cases. Each of them was confirmed by a concilium of 3 medical experts. Last year we did some pilot testing in private clinics. And this year we will start commercial sales in Russia and plan to expand to CIS countries. By next year, we have plans to start testing in foreign markets. Among our partners is one of the largest specialized ENT private clinics in Europe. They have 24 ENT specialists working full time.

[Partners]

We are looking for partners in Japan to sell our product. Our solution could be interesting for private clinics, general practitioners, as well as endoscopic equipment manufacturers, distributors, and telemedicine service providers.

[Q & A]

Q.

It's definitely easier to understand. I am very happy to see you again. So my question is heavy. So in your business model, that your customer is more about clinics and who doesn't have enough experience in and scope? What about big companies like OLYMPUS or other in the scope company? Japan is the one of the biggest market and also manufactures accumulated. So do you? Have you ever thought about that and really approached those companies?

A.

Of course, we think about it. And we understand that the largest companies understand that a smart device function enabling some, let's say tips for doctors on diagnostics is a global trend. And of course, the leading manufacturers of endoscopic equipment like OLYMPUS. So Karl Storz they develop their own artificial intelligence system for this purpose. But I think there are a lot of let's say medium sized players in Japanese market who are also interested in adding this smart device functions to their endoscopic equipment and we will be more than happy to cooperate with them.

Q.

What about single use single time use equipment makers? So usually, for the clinics, it will be very expensive to have the very, like OLYMPUS or others but these days, I heard some single use single time use equipment.

A.

And the same in Russia. So three Russian manufacturers of endoscopic equipment already cooperate with us.

Q.

So are you competitive in pricing against like you said, OLYMPUS also kind of making their own AI? Are you competitive? In terms of the cost,

A.

Our business model assumes that we get payments on per patient basis. So the clinics pay us per each patient, which was diagnosed. I think for OLYMPUS or other big manufacturers, there is another business model, they just include this software to the subscription fee for usage of equipment or something like this. We are a startup company, we can afford this subscription model at later stage.

Q.

Your products, number one question that you're using this AI for providing the diagnosis for the doctors or assisting diagnosis for doctors using this AI, these two big differences so what are you thinking?

A.

We understand that the final decision about the diagnosis anyway is done by Doctor. It is legislative requirement. But we can do some help to doctors to diagnose the disease correctly, especially for not ENT-specialists, but general practitioners.

Q.

I totally agree with you. And the second question is about regulatory aspects. Have you already applied for like FDA or C E-marks or MDL? For this product?

A.

We have plans to start certification on CE for European and for Russian market as well. FDA probably as a next step.

Q.

And you are now making a presentation to the Japanese audience. I think that you are going to want to go into the market. Japanese market, right? In that case, I'm very curious, have you ever had an interview with Japanese ENT physicians? Cause I was surprised to see the accuracy of your AI program 95%. And the process was also surprising to see the raw accuracy of the other clinicians, maybe you mean the diagnosis by the general practitioner. But in case of Japanese medical treatment market, there are very good unity specialist physicians, I believe they say our diagnosis is 100%.

A.

I understand your question. And it's the same in our country in Russia as well, the ENT specialists, they say they are experts, they do not do any mistakes. We can understand this. That's why I think

that general practitioners probably are a better target audience to start. But as I mentioned in the presentation, the recent research done in the United States shows that even ENT specialists do mistakes, and that's a question of testing. We are ready to do some joint testing with Japanese partners. We have already done it with private ENT clinics in Russia. So it would be very interesting for us to do it on an international basis.