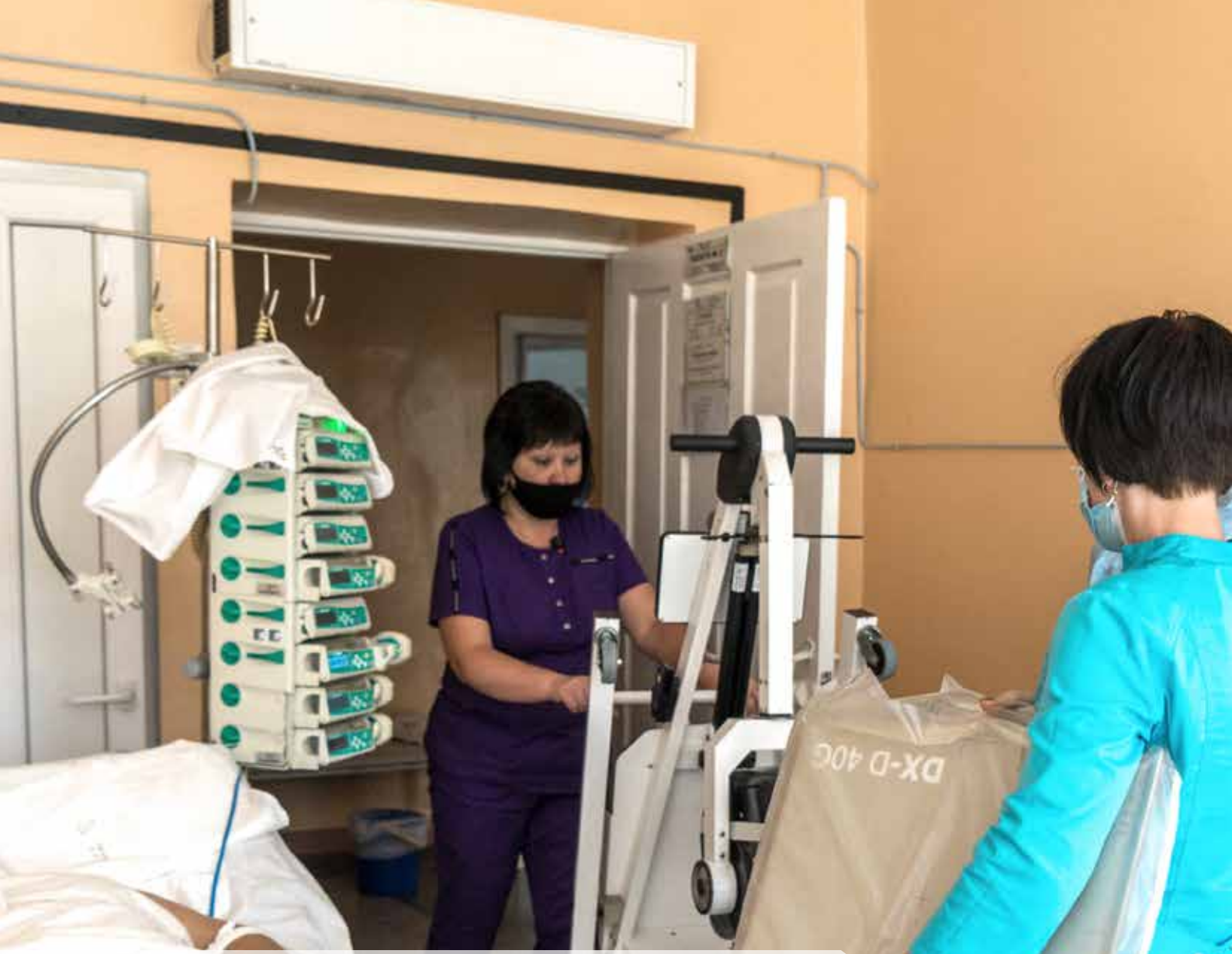


From wards to ICU, digital imaging makes the difference

Adding three mobile DR Retrofits and MUSICA Chest+ imaging software to its portfolio of Agfa digital solutions, has helped Municipal Clinical Hospital no. 11 meet today's extraordinary challenges, while preparing for tomorrow's imaging needs.

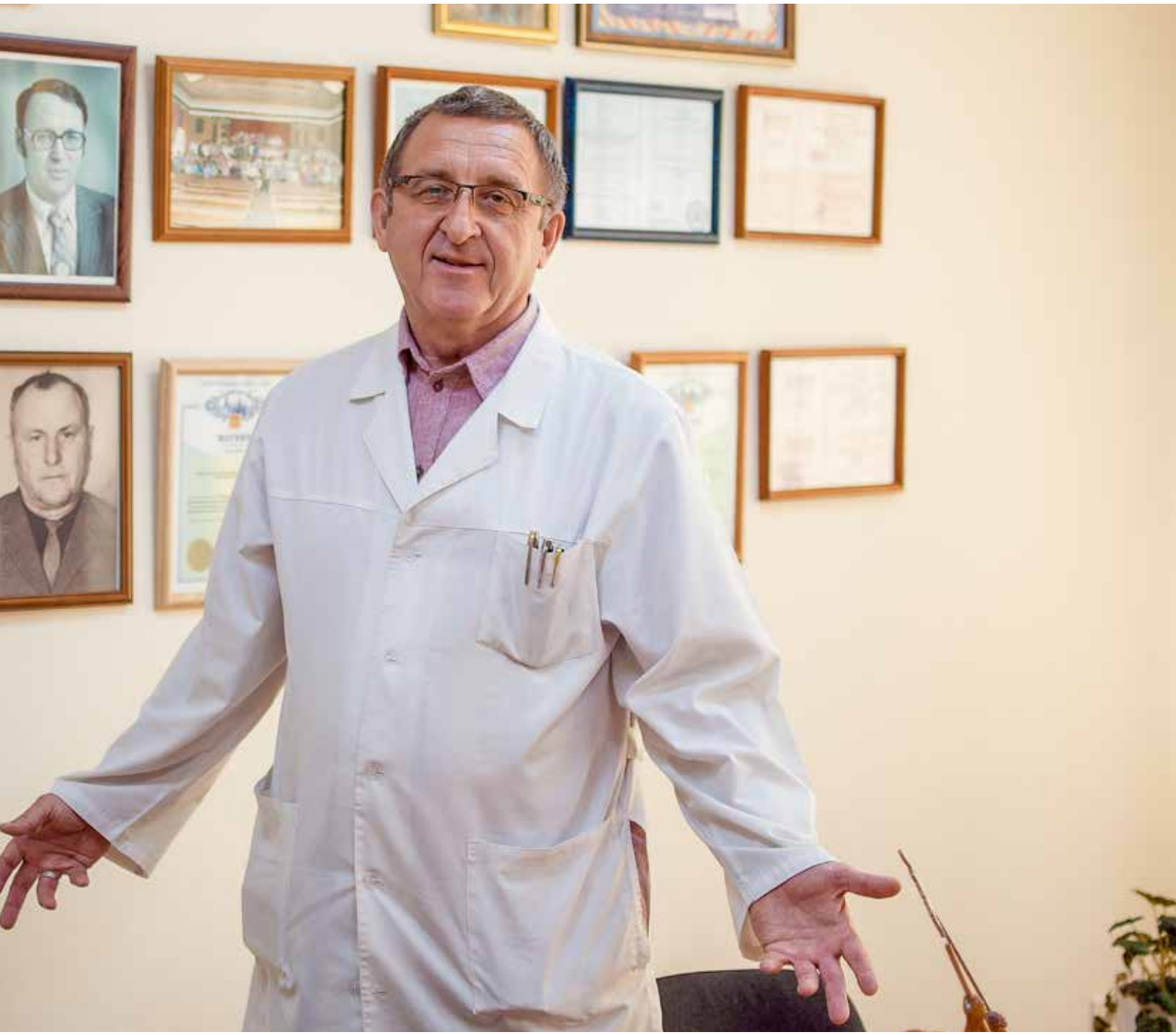
CASE STUDY
Municipal Clinical Hospital no. 11,
Barnaul, Russian Federation

AGFA

Case Study

INTERVIEW WITH:
DR. ANDREY ALEKSANDROVICH KOLOMIETS,
CHIEF DOCTOR
DR. OLGA VIKTOROVNA LARIONOVA,
HEAD OF THE X-RAY DEPARTMENT

With a global pandemic raging, already-busy hospitals are under extraordinary pressure. In Barnaul, Russia, Municipal Clinical Hospital no. 11 has been named a Covid-19 care site for children and pregnant women. This loyal Agfa customer has recently added three Agfa mobile direct radiography (DR) Retrofits, and the MUSICA Chest+ gridless chest imaging software, to its portfolio of digital Agfa imaging solutions. The new equipment is helping the hospital meet its need for fast, high-quality, hygienic bedside imaging – to address the current, elevated demands, as well as the hospital's more usual, high-productivity needs.



“Our DR Retrofits have been such an advantage for us: we can use them right where they are needed, while maintaining full sanitary and epidemiological measures.”

Andrey Kolomiets, Chief Doctor

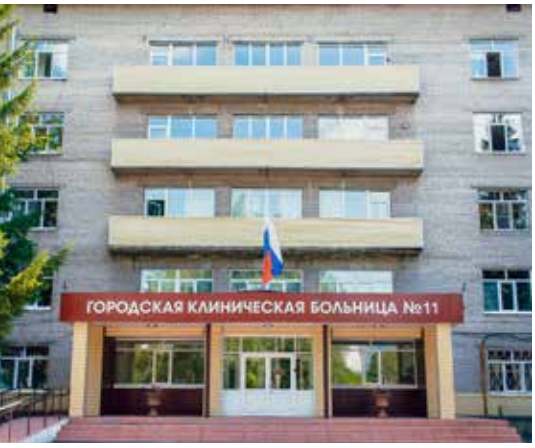
DR Retrofits take mobility and imaging speed to new heights

The hospital's journey to digital imaging began in 2010, when Agfa's computed radiography (CR) systems were featured at a Siberian Federal District radiology congress. It quickly became clear that digital radiography would solve some of the hospital's more urgent problems. "With our old analog equipment, we were having difficulty getting good-quality images. This resulted in a lot of repeat X-rays.

So when we learned that we could use digital processing tools to get good images from our equipment, we were certainly interested," recalls Dr. Andrey Kolomiets, Chief Doctor for Municipal Clinical Hospital no. 11.

The hospital chose Agfa to go digital, ordering several CR 30-X and CR 85-X digitizers. Over the years, they expanded their Agfa portfolio, with more CR units and several hardcopy printers.

"We were extremely pleased with the Agfa equipment, and the relationship with Agfa. But by 2019, we knew it was time for an upgrade," says Dr. Kolomiets. Direct radiography (DR) offered new advantages, and the possibility to maximize the hospital's existing equipment. After a six-month tendering process, the hospital added three Agfa DR Retrofit solutions, with DX-D 40G flat-panel detectors, along with MUSICA Chest+ for gridless bedside imaging.



Did you know?

- Municipal Clinical Hospital no. 11 is the second largest medical institution in the region, with a 600-bed hospital, 17 clinical units, a women's clinic, 230 doctors and a total staff of 1300 people. In addition to general maternity, urology, traumatology, stroke and neurovascular wards, the hospital has a large number of ICU units, spread throughout the site: general, toxicology, neurovascular, maternity, neonatal resuscitation and pediatric infectious diseases.
- The diagnostic radiology department is large, with 10 radiologists, 20 technicians, 10 X-ray rooms and 17 X-ray units. The hospital also has a multispiral CT scanner and 2 mammography units.
- Most of the hospital wards now have a mobile X-ray unit; these are also used in the ICUs.

Protecting the most vulnerable

These solutions took on a new importance, when the hospital was made a Covid-19 care site for pregnant women and for children. “Our hospital already has two pediatric infectious disease wards, and an observational maternity ward, which handles high-risk pregnancies, for example women who have experienced a pathology due to infectious disease. During Covid-19, we are working to help protect infected women’s pregnancies, and to ensure a safe delivery of the baby. We have also turned one of our pediatric airborne infection wards specifically to a pediatric Covid-19 ward. An infection in a child is always severe, and children need increased attention,” Dr. Kolomiets describes.

The hospital had already ordered the DR Retrofits and the MUSICA Chest+ software, before Covid-19 hit. Dr. Kolomiets continues: “They have been such an advantage for us: we can use them right where they are needed, while maintaining full sanitary and epidemiological measures. The images are sent immediately to the radiologists’ offices for reading, which is critical for dealing with this type of outbreak. And if necessary, we can move any of these systems very quickly to any ICU.”

The hospital also added more Wi-Fi access points in the ICUs, to enable images to be sent immediately from the patient’s bedside to the doctor’s workstation. “With Covid-19, we need to be able to divide the flow of patients very quickly, into clear and suspected cases,” explains Dr. Olga Larionova, Head of the X-ray department. “The speed and mobility of the DR Retrofits increases our productivity. With the heavier workload, including the addition of another neurovascular unit, this is a very important advantage.”

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>
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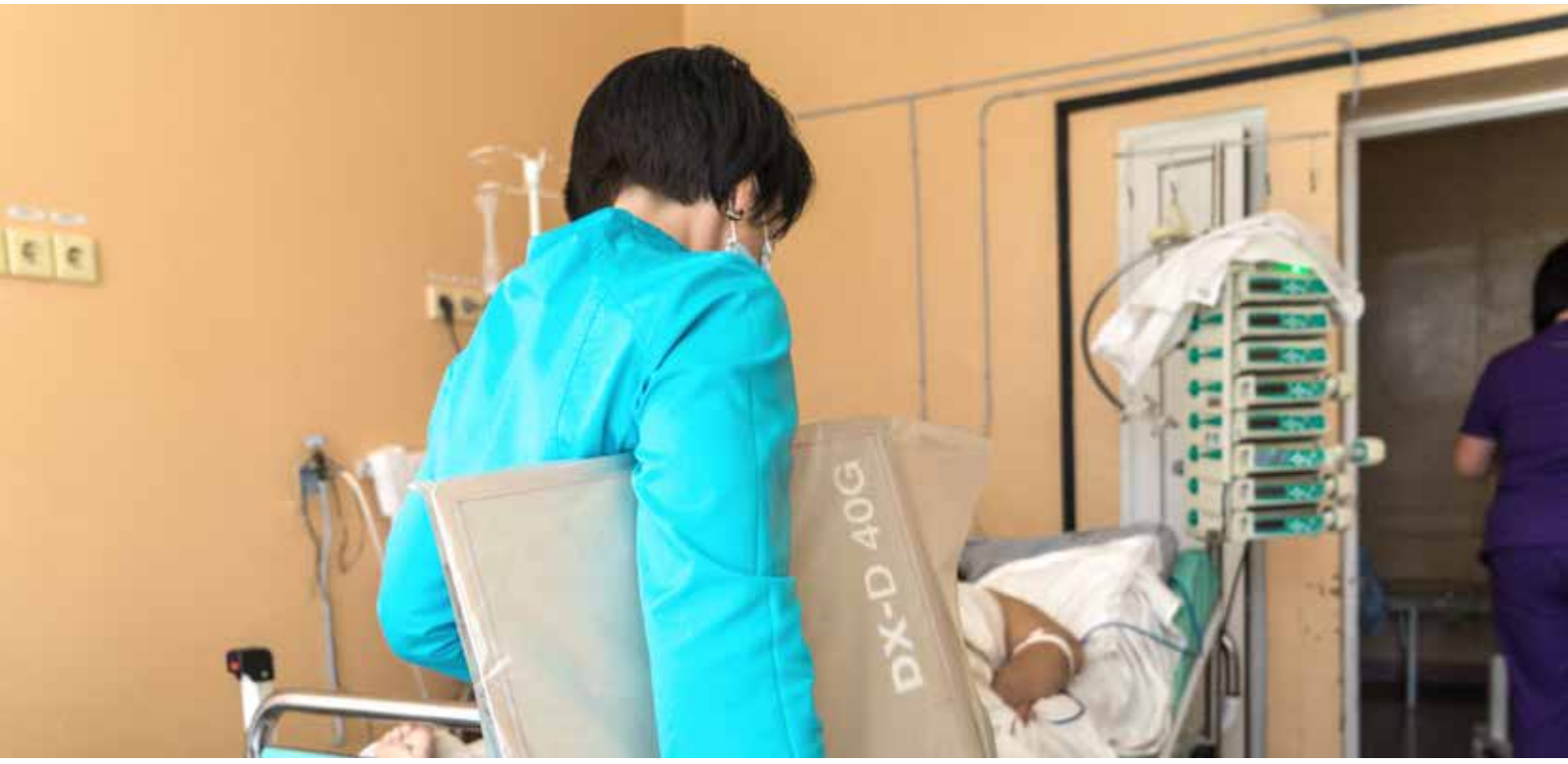
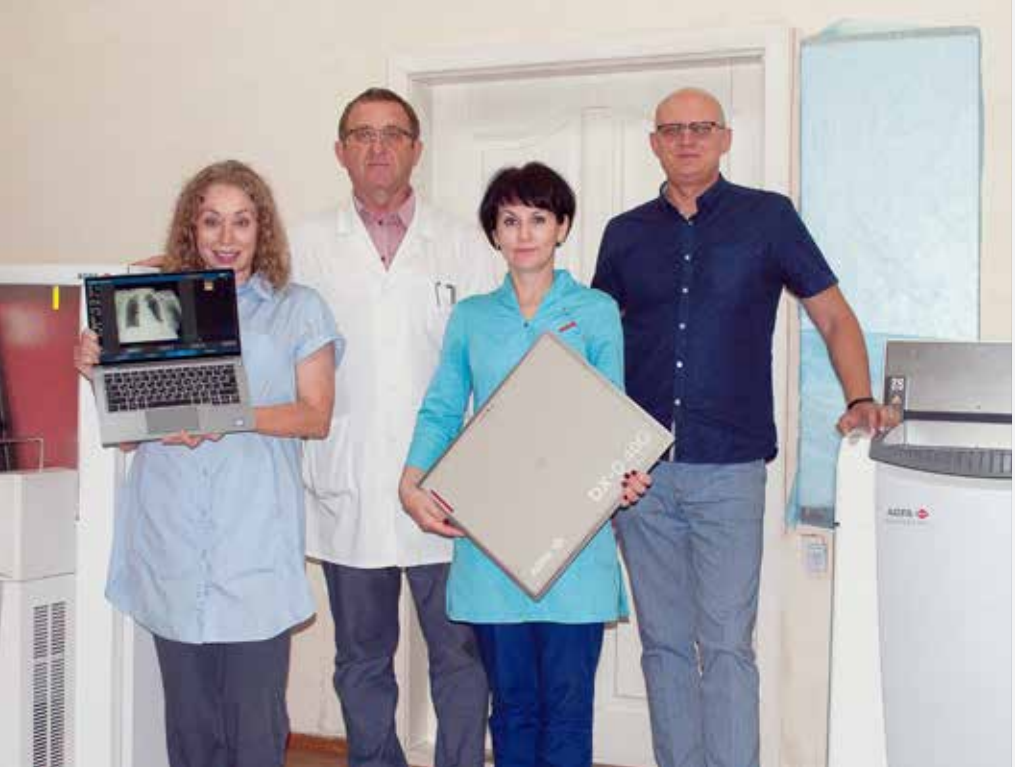
MUSICA Chest+: high-quality, gridless chest images at a lower dose

The MUSICA CHEST+ image processing, for gridless bedside chest imaging, has also been a big help in the fight against Covid-19, Dr. Larionova explains. “It is very difficult to get a good-quality chest image in an ICU: space is tight, and the patient might be unconscious or difficult to position for another reason. Before, we would sometimes take these patients to a standard hospital room to make the image, using a grid. But with MUSICA Chest+, this is no longer necessary. We get as high-quality images in the ICU, with as clear a lung pattern, as if we were using a grid. What’s more, chest imaging using a grid requires a higher patient radiation dose, so eliminating the grid is a big advantage. Especially as patients in the ICU often need multiple X-rays: and not just two or three. So radiation dose control is very important.”



When every second counts

Covid-19 isn’t the hospital’s only concern, of course, and not the only situation in which timely imaging is critical. “In addition to the Covid load, we also have our trauma department, which takes images in the wards all the time. And we have an X-ray unit in the neurovascular center, where we have our multispiral CT scanner. This allows us to take brain CTs and lung X-rays of incoming stroke patients, without transporting them to another room. Every second counts for these patients, so this ability to do a full exam in the same room, in a just a few minutes, is very important,” explains Dr. Larionova.



Agfa's contribution

Dr. Andrey Kolomiets: "In addition to the reliability and quality of the equipment, I would also give Agfa the highest score for support. Working together with us, the company's representatives have become not just colleagues, but friends, who help resolve any difficulties quickly."
Dr. Olga Larionova: "The Agfa engineer, has been so helpful, in particular. Any time of the day or night, if we have a question, he is always available. We appreciate this level of service very much.

> "With MUSICA Chest+ for gridless chest imaging, we get as high-quality images in the ICU, with as clear a lung pattern, as if we were using a grid. What's more, chest imaging using a grid requires a higher patient radiation dose, so eliminating the grid is a big advantage."
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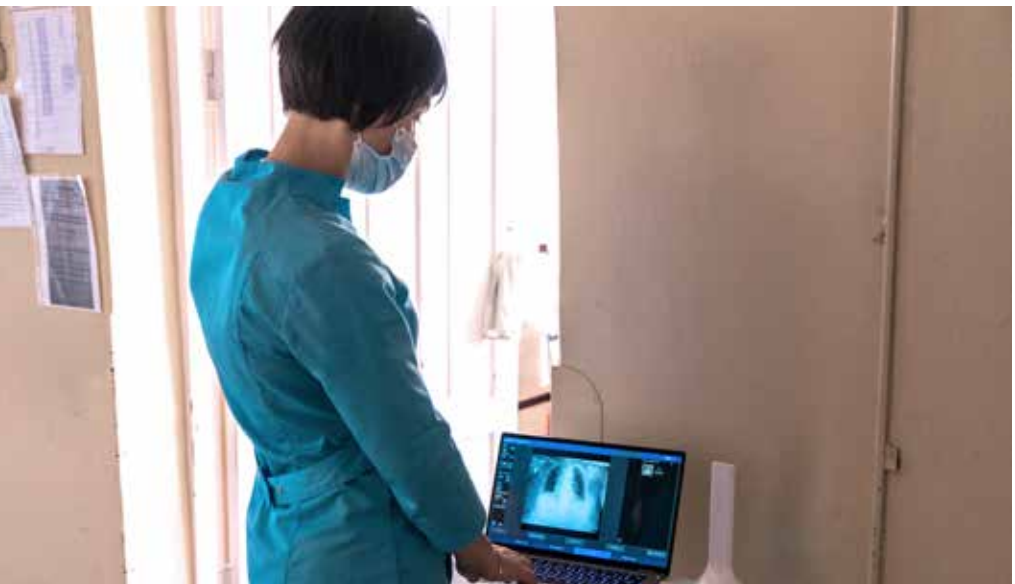
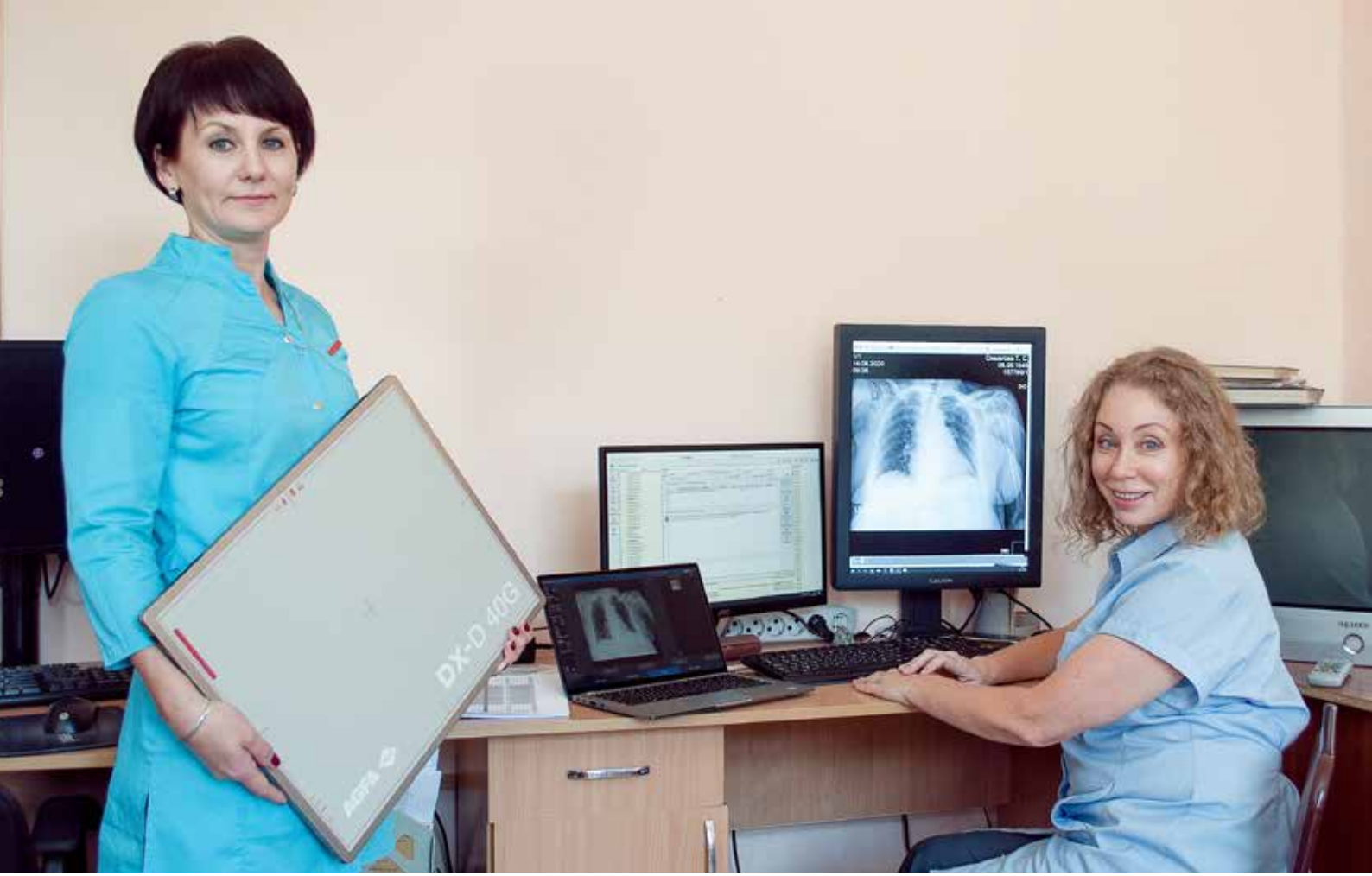


Hand-in-hand, for patient care

The move to DR was no problem for the hospital's staff, as all Agfa CR and DR solutions come with the MUSICA imaging workstation and image processing software. "We have been using it for eight years, so our technicians switched to the new detector technology with great enthusiasm, effortlessly," Dr. Larionova explains.

From the beginning, digital radiography was a sensible choice from a cost perspective, as well, says Dr. Kolomiets. "When we went digital, we eliminated the purchase of film, reagent, development... These savings allowed us to pay for the first CR in 6-8 months. Our new DR Retrofits offer similar economic advantages: using our mobile X-ray equipment with the flat-panel detectors allows us to obtain very high-quality images – almost CT quality, without the cost of a CT scanner. I would recommend the DR Retrofit to any other hospital without hesitation," he concludes.



Agfa Solutions

- **DR Retrofit:** By upgrading CR or analog modalities to DR, imaging environments can affordably leverage their existing investments, and very quickly achieve the benefits of DR.
- **MUSICA:** The MUSICA Imaging Workstation provides efficiency and workflow intelligence. Smart and self-adaptive MUSICA image processing software automatically delivers excellent DR image quality, without manual post-processing.
- **MUSICA Chest+ gridless image processing:** Chest+ offers 'first time right' imaging at the patient's bedside, without using a grid, reducing radiation dose and eliminating the need to align and disinfect grids.

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