

“ I wasn't expecting such a detailed image definition: we can observe the smallest details in all kinds of species, from a tiny sea horse to a 300 kilo dolphin! ”

DR. CLAUDIA GILI

Director of Science and Veterinary Services of the Acquario di Genova, Italy

Agfa HealthCare and Acquario di Genova: acting together for animal welfare

CR 30-X's excellent image definition helps diagnose sea creatures in a safer environment

“We were looking for a portable system: we need to be able to go to our patients, not the other way around.”

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Imagine needing to X-ray a shark! This is just one of the challenges faced by the team at the Acquario di Genova. As fast and safe diagnosis of her patients is critical for Dr. Claudia Gili, Director of Science and Veterinary Services of the aquarium, she needed to find a solution that would allow thorough X-ray examinations with a good image quality while ensuring complete safety for the veterinarians. “Sea animals that are especially large or very small add to the difficulties,” she comments. Implementing the CR 30-X computed radiography solution has been a major breakthrough for the aquarium’s veterinary activities.

A unique environment for animal care

While the mission of Acquario di Genova is to educate visitors about safeguarding aquatic environments, it is of course also very active in research and conservation. Dr. Gili’s scientific research mainly revolves around conservation of corals, reptiles and cetaceans, plus veterinary activities. “The vet laboratories are equipped to treat patients for trauma and infections, and to carry out the related rehabilitation projects,” she explains.

Up-to-date equipment is vital for the smooth functioning of healthcare activities in all fields of medicine, and animal care is no exception. But at the aquarium, the challenges can take on unique aspects. For example, to carry out X-rays, the veterinarians can be exposed to radiation in exceptional conditions – such as the shark imaging! Before, as the aquarium had no X-ray equipment, the animal patients had to be sedated and transported to other facilities for imaging. This was both stressful and dangerous for the animals. So when Dr. Gili decided it was time to find a solution that would eliminate the need to move the animals around, she turned to a colleague for advice: Dr. Daniel García Párraga from Oceanogràfic in Valencia. He recommended Agfa HealthCare and its CR solutions.

Safety, flexibility and the ability to share digital images in real time

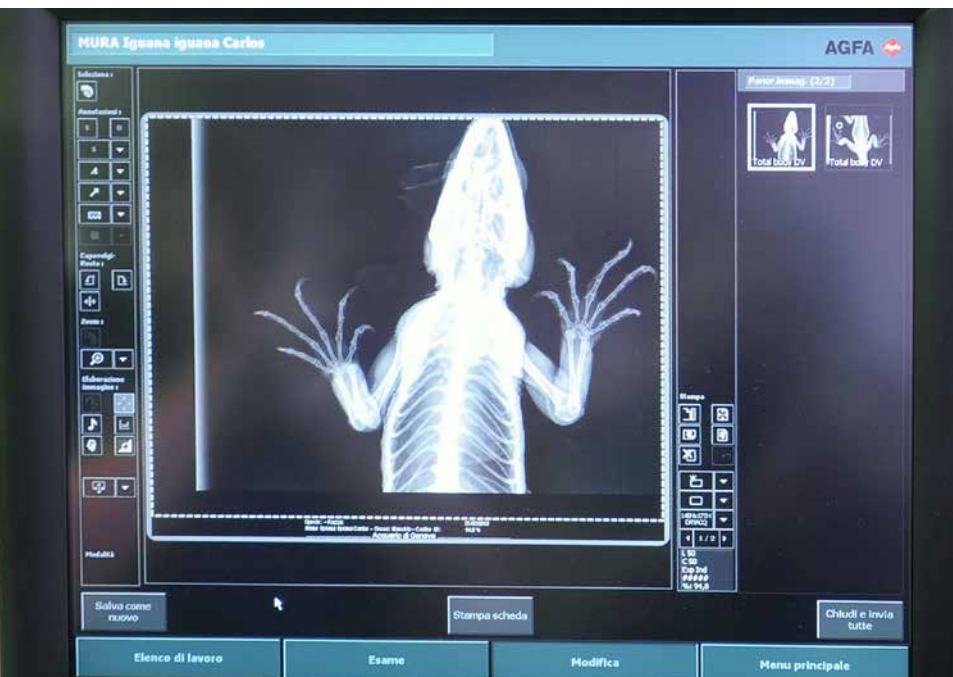
The CR 30-X answered all of the aquarium’s special needs. Compact, portable and flexible, it can be adjusted to the various species and sizes of sea creatures. Dr. Gili continues: “With the CR 30-X we can perform X-ray exams on even our most delicate patients in the various enclosures without causing them distress, and subsequently adapt the images with the CR 30-X.

And with certain precautions – such as carefully wrapping the equipment – we can even occasionally use the system in a very wet environment.”

While the CR 30-X has made imaging much easier on both veterinarians and patients, the excellent image quality was a bit of a surprise for the team. “The MUSICA image processing technology offers extraordinary image definition, beyond what I was expecting!” says Dr. Gili. “We can observe the smallest details in all kinds of species, from a tiny seahorse to a 300 kilo dolphin. For example, we have used it to diagnose egg retention in fish and reptiles, which can be a serious problem for the little animals. The possibility to adapt the images can eliminate the need to recapture and further restrain the animals in order to perform retakes; this is very important for preserving the animals’ safety and welfare.”

She also explains that being able to share results instantly with colleagues around the world has become a vital asset for a prompt and correct diagnosis of the patient. “When the health of our patients is at risk, there’s no time to lose! But with digital radiography, we can start the workflow for treatments immediately. The CR 30-X solution has really proved itself ideal for our human staff and our animal patients.”

“Finally, Acquario di Genova is certified for environmental protection (ISO 14001) and we are very careful about the sustainability and impact of our activities. A solution that does not require processing chemicals for X-rays is certainly a winning choice for our planet,” Dr. Gili concludes.



CR 30-X

- The CR 30-X is ideal for the diagnosis of the sea animals at the aquarium.
- MUSICA image processing automatically applies the appropriate image enhancement parameters for a consistent image quality, for both small and large animals. This helps eliminate the need to retake images, reducing the number of times an animal must be restrained and decreasing the impact of the handling on the animal's wellbeing.
- The NX workstation allows a smooth workflow and sharing of images for a faster diagnosis.
- The digital solution is environmentally friendly.



“The cooperation with Agfa HealthCare was excellent: everything went smoothly, the team was extremely professional and the quality of the digital images is fantastic!”

DR. CLAUDIA GILI





Did you know

- The Acquario di Genova welcomes between 1 and 1.2 million visitors per year. It directly employs 100 people, but thanks to its related tourism, the area enjoys a spillover effect in terms of employment.
- Sharks, salamanders, turtles, snakes, penguins, dolphins and much, much more: the Acquario di Genova features the greatest variety of eco-systems of any aquarium in Europe. Dr. Gili's team sees over 500 species each year.
- Acquario di Genova is involved in many projects for the conservation of aquatic species, in particular: bottlenose dolphins, seals, aquatic reptiles and amphibians, seahorses, finfish and sharks, corals and many more. In 2013, Acquario di Genova was made project leader of the new, 1.3 million euro LIFEEMY project funded by the European Union, to support conservation activities for European pond turtles. In July, 70 species of European pond turtles, which were raised for the first years of their lives at the aquarium, were released into the wild.

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