DIGITAL PATHOLOGY

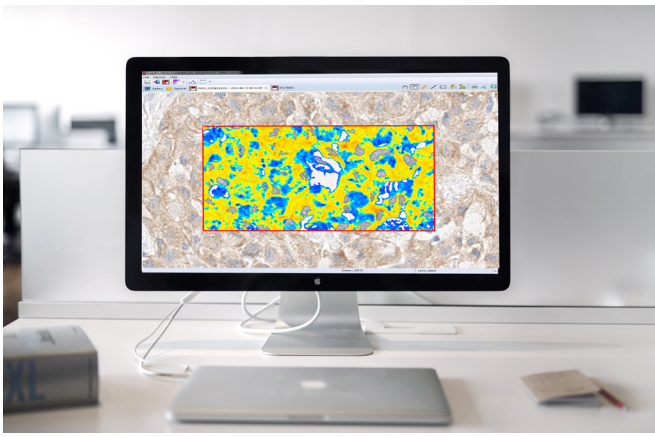
For more than 15 years now, Laurent Treluyer (Physician and Director of Digital Services at AP-HP) and Ludovic d'Apréa (Chief Customer Officer at Tribun Health) have been combining their expertise to develop information systems in French hospitals. At the forefront of digitization, these two pioneers share with us today their analysis of the state of the market, particularly around pathology.

Informations Entreprise (IE): For several years, the medical sector has been seeking to reinvent itself. What are the new concepts that the hospital must integrate today?

Laurent Treluyer: Medicine has been specializing for about twenty years now. This hyper-specialization allows us to offer a multidisciplinary approach to the patient, based on a personalized approach, and therefore, a more detailed analysis of the disease.

From this premise, it becomes necessary to synthesize the expertise of the various specialists involved in a case. In addition to this hyper-specialization, the overall complexity of care processes is increasing. In cancerology, for example, we now use genetic data to accurately characterize the potential impact of a given treatment.

Thus, the implementation of an efficient information system will make it possible to collect all the information and to synthesize it at the time of the patient's care.



Ludovic d'Apréa: The goal is to put the patient back at the heart of the care process. At the IT department level, this requires the deployment of collaborative tools capable of centralizing data and making it accessible. The digitization of processes thus appears to be the essential tool for a new, high-performance approach.

I.E: Where do we stand today?

Laurent Treluyer: One of the first digital bricks within the French hospital appeared thanks to the PACS (Picture Archive and Communication System). PACS is an information system whose purpose is to process and interpret digital medical images, index them, distribute them and archive them.

While radiologists used to consult images in the format of films, the mid-1990s marked a decisive turning point with the appearance of these PACS solutions. At the time, I was the IT Director at the Gustave Roussy Institute (IGR), the leading cancer center in Europe. We were already very advanced in the digitization field and were one of the first players to integrate PACS into our processes. With the help of our partner at the time, General Electric Healthcare, we created a new ecosystem whose objective is to provide seamless access to images. It was a real revolution.

Ludovic d'Apréa: A few years later, I joined General Electric Healthcare. That's when I met Laurent. He left the IGR for the Ministry of Health. His goal is to spread this process nationwide, in order to catch up with our digital part. It is important to understand that PACS is a major innovation in image processing. For example, in oncology, imaging is essential to quantify the evolution of a tumor. The French government is supporting this approach with the launch of the France Sans Film project. This is the beginning of the digitization of French hospitals, with the ultimate goal of improving patient care.

I.E: How does this digitization impact the pathology sector?

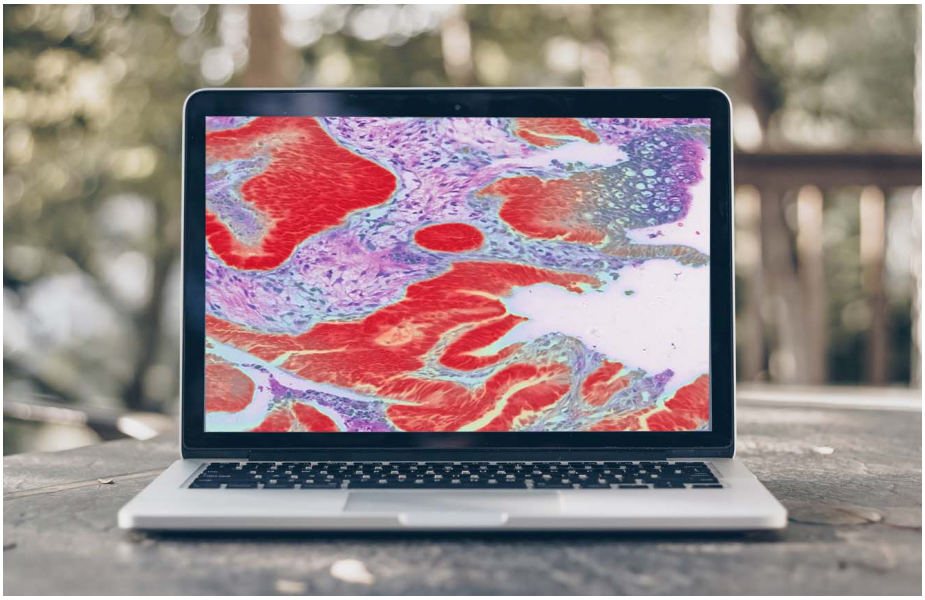
Laurent Treluyer: If we stay with the example of cancer, pathology becomes an essential element of care: without pathologists, there is no diagnosis!

In this way, the contribution of digitization, which has already been proven in radiology, consists in bringing depth to the analysis.

Laurent Treluyer and Ludovic d'Apréa

Here, the pathologist can navigate in the image, he can segment it and examine it with precision. This diagnosis, complemented by the clinical, radiological and genomic file, will allow the oncologist to define a more personalized and therefore more effective treatment for the patient.

Through these numerous advantages, at AP-HP, we have favored the digitization of our processes. This allows us to concentrate our pathologists, and therefore their expertise, on a single technical platform. From an architectural point of view, we will also be able to concentrate the images in the same place. The result? The possibility of making all the data available to all the physicians of the AP-HP.



Ludovic d'Apréa: By opting for such a solution, all members of a hospital will be able to work together around the patient, and thus optimize decision-making. Because that's what it's all about. Choosing digital technology means seeking better diagnosis and greater precision. When a surgeon has to cut a diseased tissue with a cancerous tumor, he tries to remove the maximum of diseased tissue and the minimum of healthy tissue. Digitization will allow to improve diagnoses and to optimize treatments and surgical interventions.

Through Tribun Health's CaloPix solution, our goal is to provide laboratories, hospitals and the pharmaceutical industry with a reference software platform for diagnosis, prognosis and biomarker analysis powered by Artificial Intelligence (AI).

Beyond the simple notion of digitization, it is indeed important to highlight the contribution of AI in this process. As a tool made available to the professional, AI allows to better manage the workflow (sorting cases or segmenting areas of interest), to assist in diagnosis, but also to predict. Through the nature of the diseased cells, it becomes possible to find predictive elements of the evolution of a cancer and to predict the sensitivity of a patient to a treatment, etc.

If AI helps us to better diagnose and predict, it requires digital data. Today, 90% of pathologists use a microscope, as they do not yet have access to digital tools. However, the quality of the care offered depends on it. The challenge lies in the acceptance and implementation of a complete digital chain, in tune with the challenges of our time.

I.E: Do you think the market is ready for this global digitization?

Laurent Treluyer : I feel that the will of health professionals is very strong. In fact, they can no longer do otherwise! To respond to the shortage of doctors, it is now mandatory to change the way they work, and digitization makes this possible. At the same time, this change is also creating an attractive effect for the younger generation of pathologists.

We must accelerate the pace. Behind this, the industrial stakes are colossal. If we take too long to react, we will end up giving preference to foreign software, as we did for scanners. However, we can see that all the decision centers centralized in France perform better. France has a lot of assets, we must now put them into practice.

Ludovic d'Apréa: According to some North American figures, pathologists have increased their workload by 40% over the last ten years. Digitization will help cushion this. We feel that the players are waiting, the technological barriers have been lifted, so we need to act accordingly. Tribun Health, the only digital pathology player in France and the European market leader, is ready to take up the challenge.