DIGITAL PATHOLOGY FOR PERSONALISED MEDICINE



Increasingly, the pathologist is taking his place as a pillar in the development of the diagnosis. In the same way as clinical, biological analysis, medical imaging or genomics. anatomopathology contributes to the development of a 360° vision view of the patient. It is by integrating pathology as well as possible into the workflows and the patient pathway that personalised medicine can take off. A logic that Tribun Health is working to deploy in health establishments.

ACCOMPANY THE CHANGE

As in radiology a few years ago, the situation in anatomopathology is relatively simple, "More and more complex examinations", explains Professor Jean- Yves Scoazec, anatomopathologist, university professor at Paris Saclay and head of the pathology and biomedicine department. Hence the absolute necessity to free up the pathologist's time so that he can devote himself to added value tasks. "An anapath examination is 10 GB of information, notes Jean-François Pomerol, CEO at Tribun Health. Not everything can be interpreted with the naked eye. We need tools to support us."

The first step in this process is: digitisation. The switch to digital slides is a small revolution for the services. New practices, new workflows, new possibilities... The changes are profound. With this orientation, "the key, is integration, stresses Professor Jean-Yves Scoazec. An image in isolation is meaningless. It must be involved as part of the work process and as patient data linked to the Electronic Patient Record (EPR)". It is by being associated with other data (clinical, biological, imaging, etc.) and accompanied by its report, that it will be part of the continuity of the patient's journey.

For this purpose, the Gustave Roussy establishment has deployed the CaloPix tool. It enables the recovery of digitised images, their management, annotation, qualification and archiving. "We offer our clients assistance in producing reports, explains Jean-François Pomerol. We contribute to the organisation of workflows." One of

the best examples of this is undoubtedly the development of technical platforms for repairing tissues before scanning. The slides, which can now be accessed at the click of a button and via a network, can be digitised at remote sites. It is then possible to automate and standardise the preparation of slides with a view to reducing costs. "This is the case at the Kremlin-Bicêtre University Hospital, which has grouped its three pathology laboratories on a single site."



Tribun Health's expertise in these matters has been proven. "With years of experience in this sector, this company has a perfect understanding of the realities of our business, which gives it a head start over the other players," says Professor Scoazec. And the Director of Digital Transformation and Information Systems, Christophe Mattler, confirms this: "Because of its long history and the stability of its teams, Tribun Health is very familiar with the field of pathology and the constraints of the establishments. They offer a broad and relevant vision of what this activity should be".



Christophe Mattler Director of Information Systems at Gustave Roussy Photo credit: Gustave Roussy



Another example is the management of cases from overseas at Gustave Roussy. As an expert centre, the establishment is called upon to provide its opinion on certain complex cases. Re-reading of slides, multidisciplinary meetings, digitisation offers a wide' range of possibilities. "Above all, we can directly integrate the examination report directly into a shared file hosted by us," explains the anatomopathologist. Rather than providing an isolated review between pathologists, it becomes usable by the clinicians and facilitates the eventual arrival of these patients to our centre".



And to simplify the exchanges, an agnostic approach is essential. While TIFF and Dicom are the easiest formats to use for transporting scanned slides, there are many more formats available due to the diversity of scanner manufacturers, "Because Tribun Health does not produce scanners, it does not favour any particular format, says Christophe Mattler. It remains very open and offers broad compatibility, which is very appreciable".



Jean-François Pomerol CEO at Tribun Health Photo credit: DE



Pathologist

at Gustave Roussy

Dr Magali Lacroix-Triki Pr Jean-Yves Scoazec Head of Pathology Department at Gustave Roussy Photo credit: DE

Photo credit: Phillippe de Vomécourt

And of course, digitalisation would not be complete without artificial intelligence. This is the second part of the support offered by Tribun Health. "With AI knocking on our door, it is high time we put in place adequate solutions," says Dr Magali Lacroix-Triki, pathologist at Gustave Roussy. That is why, step by step, and with the help of Tribun Health, "there is a ripple effect in the department on this issue".

AI tools are of two kinds. Firstly, those that facilitate the routine work of pathologists. Spotting, quantification, surveys... "they allow us to free up time", according to Pr Scoazec. And the other application of AI is that 'which accompanies us to better target our activity'. Discovering markers that are not visible to the naked eve is indeed one of the major challenges ahead. This is the case at Gustave Roussy, where algorithms are used to assess the risk of metastatic relapse at five years for breast cancer. "This is crucial for deciding on possible adjuvant chemotherapy and adapting the treatment to reduce the risk of relapse," says Dr Lacroix-Triki. To achieve this, Tribun Health offers various AI modules incorporating its own algorithms. In addition, a platform completes the system "to aggregate the algorithms of our partners and enrich the offer", explains Jean-François Pomerol. This is how precision medicine will come into being. "This is the real digital revolution that awaits us," prophesies Professor Scoazec.

The Editorial Staff

