

SECTION



Dr. Antonio Martínez Pozo, Head of the Pathology Department at Clinic Hospital of Barcelona, holds a sample tray from the AS-410M Auto Slide Preparation System. The device has a capacity of 24 blocks per tray and a total of 96 blocks, and a full capacity of 400 slides. 🌐

Faster diagnosis and increased work efficiency with robotic solution for the pathology lab

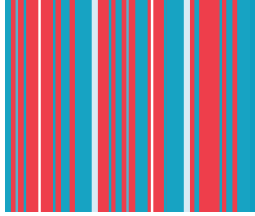
Anyone who has worked with the sectioning of paraffin blocks knows just how complex and time-consuming this procedure is. At the same time, automating and digitalising these processes are becoming increasingly important. While automating a pathology lab may seem like a massive mountain to climb, 30 hospital and research facilities in Europe have already taken the plunge and today there are 55 installations in Europe alone.

The Pathological Anatomy laboratory at Clínic Barcelona is one of the latest to successfully convert to an automated workflow: With the AS-410M device, manufactured in Japan by Dai nippon Seiki and distributed and serviced across Europe by Danish company Axlabs, it is now possible to fully automate the microtome part – often described as one of the most delicate processes within tissue processing.

Automating this process not only means a faster diagnosis for the patient; tissue samples for further analysis are also optimised.

A farewell to the water bath...

With biopsy analyses of all types, ranging from the diagnosis of oncological diseases to transplants, as well as the detection of infections or autoimmune diseases, Clínic Barcelona is a fitting example of the wide range of applications needed in today's pathology lab. In many facilities, biopsies are still processed manually and carried out using water baths. Water baths, however, also pose an increased risk of vital cross-contaminations, Dr. Aurea Mira of Clínic Barcelona explains, which can lead to inaccurate diagnoses which again could have a severe impact for the patient.



... And hello to full automation

With the installation of two AS-410M systems at Clínic Barcelona, microtomy robots now perform the histological sections automatically and, even more significantly, they do so with the utmost precision, according to the clinic. Each cut is transferred to a slide where it is deposited and stretched before finally being stored in a drying chamber for collection. This all happens inside the AS-410M with no intervention or actions required from the staff. The full automation flow also means that the AS-410M can work autonomously during the night. In total, the AS-410M can process up to 700 paraffin blocks per day, spread over two shifts.

More tissue, improved patient data safety

Converting to an automated sectioning workflow has enabled Clínic Barcelona to significantly increase the amount of tissue sample available for further tests or studies. Finally, the built-in sample identification function prevents any sample mix-ups, thus ensuring optimal patient data safety.

30% reduced patient response time

During a period of three months, the pathological anatomy service team at Clínic Barcelona assessed the consistency concerning the depth of the cuts and the direct reduction of sample handling and processing times. The team concluded that diagnosis turnaround time was reduced by almost 30% compared to the previous manual handling of this task. Further, the two AS-410M systems also increased the laboratory's work capacity by 120%, thus allowing more patients to be treated in less time. This increase came as a result of a complete reorganisation of the lab following the installation of the AS-410M which, ultimately, allowed more staff to be allocated to high value tasks such as digitalisation instead of sectioning.



We are delighted to collaborate with Clínic Barcelona in the automation and robotization of its laboratory. It is a vital process that will allow the hospital and its staff to adapt to new technological developments and incorporate new techniques and equipment, with the aim of increasing the precision and agility in the diagnosis.

Guillermo Palanca, General Director of Casa Álvarez, Spain.

NOTE: The AS-410M is distributed and serviced across Europe and North America by Danish company Axlabs through an extensive distribution network. Casa Álvarez is responsible for Spain.



With two AS-410M automatic sectioning devices, Clínic Barcelona is the first hospital in Catalonia to automate the Pathological Anatomy laboratory. The results obtained from the clinic's first 15,000 blocks of tissue have meant significant improvements, particularly concerning the turn-around time (patient response time), which has been reduced by 30% due to the increased work capacity freed up by the AS-410M device.

As of March 2024, there are 55 devices of this type in Europe.

A reduced diagnosis turnaround time by almost 30% as well as a 120% increased work capacity in the pathology lab at Clínic Barcelona has meant that more patients can be treated in less time.

