



A leading Cardio Center designed around the patient journey at Clinique Pasteur, Toulouse

Clinique Pasteur in Toulouse (France), has recently opened a new building called La Passerelle - The Bridge. Designed by and for caregivers, all necessary services have been built & organized under one roof. Equipped with an arsenal of high tech imaging modalities dedicated to complex cardiovascular treatments, it aims at optimizing the care of cardiology patients.

Five cardiologists share their perspectives



Dr. Jean FAJADET,
Interventional Cardiologist, co-leader with Dr. Bruno Farah of PCI program, Clinique Pasteur. EuroPCR Co-director, and past President of the European Association for Percutaneous Cardiovascular Intervention (EAPCI) executive committee.

“It is important to understand the role of interventional cardiology at Clinique Pasteur. In fact, interventional cardiology can be described as the heart of the cardiology department. All the diagnosis are done there, along with the treatments that include coronary interventions, structural heart, peripheral, endovascular procedures and electrophysiology.”

“We are celebrating the 40th anniversary of coronary angioplasty, which at the time we called PTCA. We have seen an evolution in indications of patients treated in this way. Nowadays we are treating patients with more complex lesions; with calcified, diffused disease; with multi-vessel disease; and with poor left ventricular function. We are treating more complex patients



“After only three days, the number of procedures performed was back to normal, thanks in part to the GE team, who accompanied all of the physicians, technicians and nurses, and to the ergonomics of the equipment.”



"From the very beginning on, I was impressed by the work taking place in the new rooms, by the GE equipment, and by the quality of the images."

than in the past. And when we consider the efficiency and the safety of our procedures for the patients, the quality of imaging is certainly the most important point in the cardiology department. At the same time, as we move out of the coronary field and into endovascular, structural and valvular, vascular and electrophysiology procedures, we have followed the same trend with increasingly complex procedures."

"We are really happy to open this new department, which is unique in the country. We now have eight rooms working every day. We initiated this project many years ago with the intent to place the patients at the

center of the system and to facilitate patient access to care. We aimed at facilitating the flow of patients from admission to discharge. We regarded imaging quality as the major criterion for achieving success with complex procedures, and this is why we selected GE to accompany us on this project."

"The concept was to have total autonomy with respect to the rest of the hospital. One floor up to the cathlabs, we have our pharmacy for the management of devices, stents, catheters and balloons, we are working in total autonomy."

"There was a question about our capability to adapt to a new system,

when we had been working with systems from another vendor for the last 30 years. There was a question about the speed to adapt and to be comfortable. And yet we did the switch just over a long weekend, and right after this switch we came back to a normal procedure load."

"This was very effective, thanks to GE, who accompanied all the physicians, the technicians, and the nurses. It was fantastic to see all these people working with the same objective. I think we were helped by the ergonomic design of the system, which is very intuitive and really easy to handle in daily practice. I was impressed by that."

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"I have been personally impressed since the beginning by the image quality we achieve with these new rooms. That is very important, particularly for complex procedures. We have the ability to achieve different views than in the past, thanks

to the deep movements of the C arm to the right or to the left. In particular for the LAD diagonal bifurcations, we see now extremely clearly the ostium of the diagonal and septal branches. The optimal visualization of the stents with PCI ASSIST is working very well.

The quality of the imaging is helping us with the duration of procedures, which are shorter, faster, with good results, and certainly safer for the patients." □



"We tried to place the patient at the center of the system. This meant analysing the patient pathway from admission to discharge in an effort to determine the best possible flow. The quality of the imaging equipment was another key criterion at the top of our minds, as it was critical to helping the teams successfully perform complex procedures. That's the reason why we selected General Electric as a partner for this project."



Dr. Didier TCHETCHE,
Interventional Cardiologist, co-leader with Dr. Nicolas Dumonteil of Structural Heart Disease Program, Clinique Pasteur.

“The structural heart program includes treatments for heart and valvular diseases, such as TAVI to treat aortic stenosis. Mitral regurgitation is treated here and is going to become a huge part of the valvular heart diseases we are addressing. We do MitraClip®, Cardioband¹ and even transcatheter mitral valve replacement.”

“We also treat some kind of tricuspid disease. Apart from the valvular side, we also have pathologies such as septum defect, patent foramen ovale, and paravalvular leaks. So we are trying to treat all these kind of structural heart diseases. The goal is to be able to treat them in traditional ways but also to be part of all the innovations. When a new device is available, we try to be one of the first teams to use it.”

“The new hybrid OR suite definitely has been a huge improvement for collaboration between cardiological team and surgical team. We are able now to treat valvular disease percutaneously, but also from surgical access, and the same is true for mitral or tricuspid diseases. With this new

hybrid OR suite, image fusion is a clear improvement in the comprehension of valvular disease and the way we can treat it.”

“We are very proud and happy to have this type of equipment. It has been making everything easier for both the cardiology and surgical teams. We are very satisfied because at the same time we get very low doses of radiation to ourselves and the patients, while obtaining very good quality of imaging, both in fluoro and cine runs. We did not lose anything by reducing radiation dose.”

“The ability to combine echo images, and more importantly CT scanner imaging during procedures by fusion imaging, brings added value to the setup in the hybrid OR suite. “The patients gain two key benefits from this new imaging set-up. First is the planning of the procedure based on the CT scan. We are now able to really plan what we are going to do. This enables shorter and more reproducible procedures, and at the end better outcomes for the patients. Second is the radiation dose reduction.”

“With the improved management of structural heart disease, we’ve learned to communicate effectively within specialties. We have to merge the skills of the echocardiographer, the anesthesiologist, the cardiologist and the surgeon. It is a new environment for us, a new philosophy. We really have to trust what the echocardiographers are telling us. They are guiding the procedures, particularly for mitral or tricuspid disease. We are more reliant on the echocardiographers’ advice than on our hands, and this is enabled by the new environment.” □

1 Cardioband Mitral System, Edwards Lifesciences



Dr. Serge BOVEDA,
Electrophysiologist, co-leader
with Dr. Jean-Paul Albenque of the Cardiac Arrhythmias
Management Department, Clinique Pasteur.

“We are a team that performs 1,500 ablations every year, along with implantation of devices such as ICDs, resynchronizations and pacemakers. About 900 devices are implanted every year at Clinique Pasteur.”

“Nowadays, the treatment of cardiac arrhythmias is more and more accurate and complex. We are treating every kind of arrhythmia, ventricular and atrial. We focus a lot on the treatment of atrial fibrillation, mainly by endovascular approaches but also surgical approaches, and hybrid approaches using both endovascular and surgical techniques. At the same time, we are treating more and more ventricular arrhythmias.”

“We went from the past to the future with a new platform that is very well equipped, with high quality imaging. The fluoro imaging is now of excellent quality, with low radiation dose, which is very important to the patient as well as the doctors and nurses. At the same time, we can integrate a lot of information with a large screen where we have access to all data needed during the intervention.”

“Surprisingly, the adaptation has been quite easy. The new system is easy to

use, so the team has been trained quite quickly. It has been easy for us to transition to this new generation of imaging systems. I think the new department is very valuable for the patients, because we can now provide high-quality treatment and high-quality procedures, thanks to the fusion of lot of different imaging in the same system. For example, we can

make a fusion between the pre-op CT scan and fluoro images, rotational angiography and 3D mapping systems, and we have all this information in a single screen.” This is very important for guiding the operation and targeting the right spot at which to treat the patient.” □





Dr. Antoine SAUGUET,
Interventional Cardiologist, co-leader with Dr Benjamin Honton of the vascular program, Clinique Pasteur.

“In the past I was more involved in coronary-angioplasty. I moved 10 years ago to peripheral angioplasties. We perform more than 1,000 peripheral angioplasties per year and more than 100 EVAR cases.”

“When we moved to the new cath labs, the purpose was to use vascular cath labs exclusively, and not only coronary/vascular cath labs with additional imaging tools like roadmap

and digital subtraction angiography. We can also use pre operative CT scan and DSA in the room, and it is helping us to treat patients in the best way. Using fusion imaging, we significantly decrease X-ray dose for the patients and the staff.”

“When we plan to treat a patient with an abdominal infrarenal aneurysm, we have to plan the treatment strategy with the pre operative CT scan. That

helps us when we use image fusion to well locate the renal arteries and the superior mesenteric artery, and to place the prosthesis at the right location for the endograft deployment.. We can reduce the dose thanks to the use of the pre operative CT scan , and it also allows us to decrease the amount of contrast media and decrease the X-ray exposure time versus where we were working in our previous cathlabs.” □



Dr. Bernard ASSOUN,
Cardiologist and CEO, Clinique Pasteur

“Two of the essential values for this new establishment are clinical excellence and innovation. This project is the culmination of a remarkable partnership with GE, which has been closely aligned with these essential values.”

“Looking back on the past year, this project is really successful:

Adapting fast to this new technological environment with on-site support from GE.

Optimizing patient care, efficient management of emergencies, with care

givers' teams who secure each step of the patient journey.

High resolution imaging and technological performances ensuring a high level of medical service in all the interventional cardiac and vascular areas.” □

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The Statements by GE's customers described here are based on results that were achieved in the customer's unique setting. Since there is no " typical" hospital and many variables exist i.e. hospital size, case mix, there can be no guarantee that other customers will achieve the same results.
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