



**Artis zee:**

## Future Vision for the Italian Hospital

In the Artis **zee** interventional imaging system, noted Argentinean cardiologist, Liliana Grinfeld, M.D., of the Italian Hospital in Buenos Aires, has found a piece of equipment that works as hard as she does and lives up to her high standards for image quality, versatility, reduced radiation, and dependability.

By Bill Hinchberger



Founded by the Italian immigrant community over 150 years ago, the Italian Hospital in Buenos Aires is a regional center of excellence in South America. As far back as 1959, it made history as the venue for Argentina's first liver transplant, and it has since developed a reputation for taking on the most acute cases in sundry areas. "I always say that the Italian Hospital is the Cleveland Clinic of South America, because we strive to do the best," says Liliana Grinfeld, Chief of the Hemodynamics and Interventional Cardiology Service at the Italian Hospital. And she should know: She did her internship and began her career at the venerable U.S. institution. "We try to keep the best level in terms of academics, scientific research, patient care – everything."

No wonder that Siemens' Argentinean subsidiary was especially pleased when the Italian Hospital opted to purchase an Artis zee interventional imaging system, after years of relying on other equipment. The machine will surely be put to the test in Buenos Aires – especially by Grinfeld, long recognized as a pioneer in interventional cardiology. Grinfeld was Argentina's first hemodynamic cardiologist. She performed the country's first coronary angioplasty, and was the first physician there to place a stent. She was the first and only woman president of both the Interventionist Cardiologists Association and the Argentinean Cardiology Foundation. In her spare time, she performs clinical research, and together with her cardiologist brother she is developing a new ostium stent. Earlier this year, Grinfeld also spent time analyzing the options for the new piece of equipment that the Italian Hospital

intended to invest in. "We looked at many companies, and we discussed things with the hospital administration and amongst ourselves," she says. A member of her team visited a hospital in Chile that had an Artis zee, and he returned with glowing reviews. "We decided that it really fit our needs," Grinfeld concludes, adding, "This is a big upgrade for us."

In making the decision, Grinfeld admits that nothing counted more than the quality of the image. "The quality of the image is the most important thing," she says. "We need good technology to keep on progressing with very severe coronary patients. Coronary work is the most demanding area, and you need to have very good images in order to have very good results."

### Complex cases require advanced technology

The Artis zee's image enhancement capabilities impressed Grinfeld. As someone with extensive experience placing stents, Grinfeld draws particular attention to the IC Stent feature, which, according to the promotional material "greatly improves the visibility of the deployed stent for better judgment of the outcome of the procedure. Images are generated with just one click within seconds during the procedure in the cath lab." Grinfeld notes that it is very important for the prognosis of the patient to see how the stent is deployed. Image storage also earned points for the Artis zee. "Maybe you saw the patient a week ago and you can come back and still have the image there," she says. With over 500 beds and a reputation that earns it referrals of particularly dif-

ficult cases, the Italian Hospital will push the Artis zee right into action. "The other equipment we have is quite old now, so it is going to be the workhorse," says Grinfeld. "We have a very busy coronary angioplasty area – two rooms work mainly with coronary patients. Our coronary care unit is huge. We receive a lot of acute patients. So we are doing about ten different procedures, and we are seeing more and more complex cases."

Much has changed since Grinfeld performed the country's first angioplasty, together with Dr. Jorge Belardi, in the early 1980s. "We were in panic," she recalls. "We kept calling each other on the phone the night before. I remember that we could inflate the balloon for eight seconds – that was the limit." Now angioplasties are, if not routine, at least commonplace at the Italian Hospital. "We started angioplasty with very discrete lesions," Grinfeld recalls. "Now we are doing triple vessels and cardiogenic shock. This hospital has had coronary surgery for over 30 years, so we have a lot of previous CABG (coronary artery bypass grafting, pronounced "cabbage"). We have a very high workload, and we needed better technology." Given that workload and the severe conditions of many patients, the Artis zee's versatility turned out to be an important feature. "We decided to buy a flat panel, and we wanted one that was versatile because many of our patients have severe pathologies in different sectors," notes Grinfeld. "For example, last week we did an aortic angioplasty and a coronary angioplasty at the same time – and this sort of thing is not unusual. We might do a renal angioplasty and a

“The better we see, the better it is for the patient.”

Liliana Grinfeld, M.D.,  
Department of Cardiology,  
Hospital Italiano,  
Buenos Aires, Argentina



coronary angioplasty. We need that image when we have our patient on the table. We don't want to have to move the patient to another room to do another procedure.”

### **Selling Points: Less Radiation, More Service**

The Artis **zee**'s ability to provide high-quality images with the lowest possible dosages of radiation will help both patients and medical professionals, says Grinfeld. “Many patients have a diagnostic procedure, and then they go to the gamma camera, computer tomography with 64 slides, and coronary mapping. We have a package there – and a lot of radiation,” she noted. But that's just the beginning. “Then we do an angioplasty, an interventional procedure to fix the artery. That's more radiation. You go back to the gamma camera or computer tomography, and then we have a 10-15 percent restenosis, so they will submit to the procedures again. So we are very concerned about reducing radiation dosages.”

However bad it might be for the patient under such constant bombardment, physicians have it even worse in terms of exposure to radiation. “We doctors work right next to the tube, and we don't move,” says Grinfeld. “Radiation protection is important. All of the companies are worried about that, but [with the Artis **zee**], we have found a solution.” Siemens' track record for prompt, effective and affordable post-sales service also favored the Italian Hospital's choice of the Artis **zee**. “We really need a company that provides very fast, competitive service. We need to know that you'll be there when we need you,” says Grinfeld. “We had good feedback about this, not only from the company, but also from within the hospital. The Italian Hospital had already bought many pieces of equipment from Siemens. The people in the radiology department recommended

the service as very good – not only in terms of being knowledgeable, but also in having the spare parts on hand. We cannot wait a week to replace a tube.” For physicians, the technological advances can be fascinating. “It is a big change. I am falling in love again – with technology, not with a man,” chuckles Grinfeld. But what patients, and ultimately their doctors, want is better, safer and more efficient treatment. Better diagnosis and prognosis. Grinfeld has high hopes with Artis **zee**. “There are certain patients that we could not approach before because we did not have the technology,” she says. “These patients have complex anatomies, and with very complex anatomies you need to see very well. I think we can increase the number of patients we can work with. Not a huge jump, but we can expand.”

However, Grinfeld emphasizes that her reason for wanting the Artis **zee** is not mainly to increase the number of patients who can be served. “We need better quality. That's the main thing. Some patients are in cardiologic shock, and there is no way you are not going to perform a procedure. The difference is that we feel a little more confident when we can see more details and have a better quality image. So we can do a better job for those patients.”

Better precision in placing stents should help achieve better results, Grinfeld adds. “Before, we might have been putting stents farther out than we needed to because we were not sure where to deploy them” – and that, she notes, leads to a greater chance of restenosis and recurrence.

Better vision can also help doctors decide which tools to pull from their bag of interventionist techniques. “What kind of technology do you want to use? Do you want to use a laser? Do you want to use a carotid balloon? Do you want to use a rotor blade?” Grinfeld asks, rhe-



torically. "For example, when we see that the artery is calcified outside the wall, the laser will not penetrate calcium, but if the calcium is outside the wall and the stenosis is inside the artery, you know that that is fibrous tissue and you can use laser. And the laser is better than a rotor blade because the laser transforms the tissue into water and carbon dioxide. The rotor blade leaves the plaque in pieces," she explains. "The better we see, the better it is for the patient."

One of Grinfeld's mentors at the Cleveland Clinic was the eminent Dr. William L. Proudfit. Proudfit taught Grinfeld a lesson that she will never forget. "He always told me, 'If what you read does not match your experience, don't believe what you read,'" she says. "In the papers

you can see a lot of things, but experience is the key." With the better images provided by the Artis zee, Grinfeld can now more fully adopt this philosophy. "We need excellent vision to solve the problem," she says. "You have to see what you are doing in order for the patient to not get into trouble. Up until now we had limited images because the technology was not there."

The new technology might also help Grinfeld sleep better. She admits to insomnia after she loses or cannot help a patient. "We have patients who come here, and their hearts are stopped. You go and work two hours on them and the patient dies. That makes you feel very bad. I can never get over it," she says. "And not only when a patient dies. When you are supposed to open an artery and

you cannot, you ask yourself: What did I do wrong? When you cannot open an artery, it is already certain that the patient is going to die."

Indeed, Dr. Grinfeld is enthusiastic about the potential for improvement. So much so that, at least in her dreams, she's in the market for another Artis zee: "Hopefully we will get a second one really soon."

*A former correspondent in South America for The Financial Times and Business Week, writer Bill Hinchberger is currently based in Marseille, France. He has contributed to publications like The Lancet and Science, and reported for the Medical Education Network Canada.*

#### Contact

johann-gerhard.kreft@siemens.com