

## Volume 9 - Issue 4, 2009 - Imaging Leaders

### Interview with Prof. J. Zamorano

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#### Interviewee

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**With over 190 peer-reviewed publications and an impact factor of over 500, Prof. José L. Zamorano, the current president of the European Association of Echocardiography of the European Society of Cardiology, is a well-known luminary in the field of echocardiography. Here, the president of the 2009 edition of the EUROECHO congress shares his opinions with IMAGING Management on how echocardiography has transformed cardiovascular medicine, and how radiologists and cardiologists can and should learn to work together.**

#### What Impact has the Development of Echocardiography had on Medical Professionals and Patients?

Echocardiography has transformed the practice of cardiovascular medicine by improving the prevention, diagnosis, and management of various cardiovascular disorders. It is the most commonly used imaging modality in clinical cardiology, since it allows a comprehensive, immediate assessment of cardiac and vascular anatomy and function. Its availability, portability, non-invasive nature and cost-effectiveness, together with the wealth of information it provides, renders echocardiography the first choice imaging technique for the diagnosis and follow-up of most heart diseases.

#### What are the Most Exciting Advances in the Application of 3D and Portable Echocardiography?

Real time 3D echocardiography has emerged as a paradigm in the field of cardiovascular imaging. This new technique provides decisive and accurate information regarding the diagnosis, prognosis and management of cardiovascular patients. There is no doubt that echocardiography will all be in 3D in the future. The heart is a 3D structure, and we want to see it and assess it in 3D. However, we can outline the more probable evolution of 3D echocardiography as follows:

- Improvement in the Temporal Resolution of 3D Echocardiographic Images.

Nowadays, the relatively low frame rates obtained by 3D echo systems are an important limitation for the evaluation of frequent cardiological problems such as infective endocarditis or cardiac asynchrony. The development of new technologies will provide the cardiologist with new and better systems, working with higher frame rates.

- Improvement in Spatial Resolution.

Similar to the preceding point, advances in this area of the technology will also come to fruition.

- Increment of the Volume Captured in Real Time by the Echo System.

This will provide the cardiologist with a more complete evaluation of the heart and great vessels.

- Development of New Tools and Software to Use Echo Contrast Agents in Daily Clinical Practice with 3D Echocardiography.

Furthermore, the development of new protocols might provide a new way to evaluate myocardial perfusion by means of 3D echocardiography.

#### What can be Done to Increase Routine Use of Echocardiography?

Both miniaturisation and portable echo systems are going to drive the uptake of echocardiography. Cheaper equipment prices will also help to make echo more widespread. I am positive that echo will go outside the echo lab to involve GPs - not for a complete diagnosis, but definitely for screening. This means that quite soon, we will have to integrate education on the use of echo for screening into the present curricula of GPs and medical students at university.

#### What are the Most Enjoyable Aspects of Your Professional Life, and Which are the Most Challenging?

Medicine is a profession that allows you to serve mankind and this is, at the core, what motivates me. I have no doubt that you get out much more than you give. Each patient gives you an opportunity to grow. Moreover, as a researcher, I have enjoyed meeting and learning from different colleagues worldwide, and many times you even get to know their families and relatives, which enriches professional relationships. Also, as a researcher, you always face novel challenges, so your profession never grows old. One of the most challenging issues from a diagnostic perspective, is detecting subclinical disease when the patient is still asymptomatic and much work remains to be done here.

#### Is "Management" Important to You?

Management is extremely important nowadays. I am the Director of the Cardiovascular Institute at the University Clinic of Madrid. I did a four-year MBA course over an 18-month period, and this has certainly helped me in managing and addressing different situations, and being aware of the alternatives.

#### Is Education a Strong Part of Your Professional Life?

Well, education is one of my major professional passions. As professor of medicine, I have responsibilities at the university of Madrid. The implied responsibility of this position means that you must be available to the students, trying to teach and influence their lives forever. I love this part of my life, particularly trying to introduce new technologies into the education of our students. I also implemented a web-based "student's corner" that seems to be a very effective platform for our students.

#### Do Turf Wars Exist Between Radiologists and Cardiologists? Who Should Take on Imaging of the Heart or Cardiovascular System?

I have been working with radiologists for the last five years, without any problems in collaboration. The main point for any physician in this field is to have an interest in cardiovascular imaging regardless of specific job titles. Cardiologists have the advantage of knowing the specific disease more deeply, and this makes a great difference to image interpretation. Though our patients are in a 'cardiology arena', I can see a future where the radiologist is working as an integral part of a big cardiology department, without any problem. In the near future, there will be fully dedicated CT or MRI scans for cardiology, so in fact there will inevitably be professionals working full-time in this field, whether radiologists or cardiologists.



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