EuroTimes Interview *with Ioannis Pallikaris MD PhD*

Refractive surgery pioneer Ioannis Pallikaris MD PhD has been elected the next president of the ESCRS. He will begin his two-year term at the end of this year, succeeding outgoing president Marie-José Tassignon MD PhD. Dr Pallikaris is Professor, Rector of the University of Crete, Head of Department of Ophthalmology, University Hospital, Heraklion, Crete, Greece and founder & Director of the Vardinoyannion Eye Institute of Crete. Dr Pallikaris developed the LASIK procedure involving the microkeratome and hinged corneal flap and the excimer laser in 1991. He has published several books and countless journal articles on refractive surgery. His numerous awards include the Barraquer award, Charles D. Kelman Innovator's award and the Keratomileusis Study Group award. More recent innovations include the Epi-LASIK technique and the Photoablatable Lenticular Modulator (PALM).

EuroTimes editor Sean Henahan spoke with Dr Pallikaris at the 9th ESCRS Winter Refractive Surgery Meeting in Rome about the current state of the ESCRS, the challenges of the job, and his priorities for the organisation.

ET: You've been involved with the ESCRS from the earliest days. How has it evolved over the years and what is its current direction?

Pallikaris: The ESCRS has grown and changed since its founding in 1991. In the beginning the ESCRS was designed to answer the needs we had at that time. There were many diverse activities happening in Europe with different regional medical societies and individuals. The idea was to unify these activities while respecting the local societies. Many things have changed between then and now. First of all, the whole European situation has changed a lot. It is parallel to the expansion of the EU, which was smaller then and has continued to expand. The ESCRS has also continued to expand, but we think more in terms of the geographical definition of Europe rather than the political EU definition.

In the beginning we spent a lot of time organising. It took a lot of effort to look for new members. The Society has expanded to include members from all over Europe. The Society is really strong now and is much more open. Today we are looking to expand, particularly to the South and to the East. We are looking to improve our education component. We are also taking a broader look at using advanced information technology systems. I also think the ESCRS today has to play a much more political role internationally.

ET: The recent EU expansion added new member states. It also raised new issues about medical professionals migrating from poorer countries to practice in richer countries. What is the role of the ESCRS in that kind of issue?

Pallikaris: The ESCRS cannot really intervene at that level of disputes between the different European countries. We are not a legal body. Rather, the ESCRS is working much more on the education side, developing programmes to improve the quality of knowledge. We have been asked at times to become involved, but we don't have the right to interfere. Our goals are a bit different. However, we may have some influence by working through the central offices of the EU in Brussels, and could play a larger role in regulatory issues.

ET: It is clear to anyone who has attended a recent meeting of the ESCRS that the organisation is attracting interest from beyond Europe. Is this part of the expansion strategy?

Pallikaris: It is true; we are seeing more delegates from the Middle East, Africa and the Far East. We are interested in encouraging this trend. We want to encourage surgeons from these areas to come to our Society. We are sensitive to the needs of the Middle East region and we have many members in Turkey. We expect other countries in that region to join. We are also accepting co-opted members from the Arab and African world. We've seen big increases in attendance at our meetings from this part of the world. It is clear that they are now looking more towards Europe than the US.

ET: You are involved with the World Eye Hospital, which involves this kind of cooperation. Can you tell us about that?

Pallikaris: Yes, this is a good example. My institution is collaborating with the World Eye Hospital in Turkey on several projects. When I started to work with them two years ago, they had almost no contact with the ESCRS. Now they are represented in our Society and had a dozen presentations at our meeting in Rome. The same thing can happen in any other country, say Poland or Slovakia. If they find some connection they will become active participants in our activities. The newer members can form beneficial collaborations with the original members. Looking farther, we have established contacts with China, which has a booming economy. The European ophthalmic tech companies are very active there. We need to also have contacts there and encourage doctors in that area.

ET: How does Russia fit into the equation?

Pallikaris: Russia is a very confused situation. I have been there several times and have made good contacts. It is huge population. There are many traditional, very old ophthalmic societies there, but they don't always have a lot of international perspective. There are also many new societies reaching out to us. For a long time, the Russians were resistant to opening up, but now I think that is changing and it is very important to include them in our activities. We have to encourage collaboration. We do have a language problem. English is not spoken much in Russia, most speak only Russian. If the ESCRS want to form a relationship with Russian surgeons we have to go there and help them translate. We are now developing an online Russian language version of EuroTimes, which I think is a good idea.

ET: What are your personal goals and objectives as incoming president?

Pallikaris: The success of the Society is not necessarily related to the president. The society has a long history and a lot of very good people. We have some very experienced clever people on the committees. Active members in working groups and sub-committees have a lot of influence and can provide good ideas. The president has to represent the society on an international level. I expect to be more like a minister for foreign affairs. Our common interest is the expansion of the activities of the Society. This is probably my most important role. I'm from Greece, a small country in the southeast of Europe. This helps to send a message that the Society takes all the countries of Europe very seriously. We are looking very much to develop contacts and build memberships in new EU member states and countries to the east and the south. It will help to encourage people in those countries having someone from the region as president.

ET: What does the future hold for refractive surgery?

Pallikaris: I think the ultimate goal for laser surgery is to find a technique where you don't have to touch the eye at all. We're seeing this in the diagnostic field with methods like OCT (optical coherence tomography). I expect we will see no-touch therapeutic techniques, for example, femtosecond laser surgery. But first we will need more information on biomechanical changes that occur in the cornea with laser treatment. Once we can incorporate that information, we'll have a more precise idea of what we are doing with the laser. The easier approach is to go to the surface, surface ablation. We still need to solve the problem of the healing of the epithelium, and the delayed response, but I think surface ablation will be the future. Another way to go instead of removing tissue is to change the shape of the cornea by moulding it with a special contact lenses and then stabilising it with UV light using substances to stabilise the collagen fibres. Ultimately I expect we will move to a more biological approach, and away from cutting the cornea.

Moving beyond laser surgery, I think the future belongs to the accommodative IOLs. I don't think multifocal IOLs, or techniques such as scleral expansion will survive in the long term. Eventually we will see an effective accommodative IOL. I have some ideas in my mind how we might accomplish this. At this point many ideas are patented, but nothing is realised. In theory, we might use an injectable substance, or pneumatic or hydraulic systems. Current

accommodative IOLs are not adequate. We'll need a lens that performs like the natural human lens. Surface ablation will continue to have a role for fine-tuning results after refractive lens implantation. Until then, the best vision you can get is with a hard contact lens. This is what I always say to my patients. If someone comes to me with high myopia and high astigmatism and is tolerant of his contacts, I say don't do anything, this is the best vision you can ever get. Whatever you get with the laser will be worse.

ET: What role does the ESCRS have in clinical research?

Pallikaris: We can play a major role in coordinating Europe-wide research projects. We have already begun to do this with the European Cataract Outcomes Study. We should base our practice on a sound evidence base supported by large clinical trials such as the ESCRS-sponsored European Randomised Multi-centre Clinical Trial of Antibiotic Prophylaxis for Endophthalmitis following Cataract Surgery that is currently under way. As of now, we have not seen adequate clinical trials to form an evidence base for LASIK and most refractive procedures. My first priority will be to explore opportunities for the ESCRS to become active in gathering an evidence base on the results of LASIK and other refractive procedures. This would hopefully revolve around a core group of referral institutions, and would allow surgeons to compare their own results with a database of outcomes and side effects.

The basic problem we have today is that companies are driving the field, pushing surgeons to use systems, which may not necessarily be the best ones. We've seen technologies come and go over the past 10-15 years. These are highly promoted but some last only one or two years and disappear. We have to develop a meaningful evidence base on which to make our decisions.