

The man steering the organisation dubbed “the leading force in European pathology” is not one to dwell on the negative. Raed Al Dieri, Director General of the [European Society of Pathology](#) (ESP), is an internationalist but also a proud Syrian. He confesses to finding it hard when people ask him about how he feels about the devastation ten years of war has wreaked on his homeland.

He finds it difficult that the only image most people have of his country – one of the most ancient and influential civilisations on earth – is one of destruction and suffering. “You’re talking about a country with thousands of years of history, strongly rooted in every field of education,” he says. “People don’t know about our high levels of education.” And while he is extremely sad about what has happened, he expresses confidence that the situation is going in the right direction, “I feel optimistic that in the end everything will be corrected.”

So too in pathology, Al Dieri’s is happy to play the long game – measuring the timeframe for meeting his goals in terms of decades rather than years. “We are getting there,” he says repeatedly, as we talk about the challenges faced by the profession: the status of pathology in the multidisciplinary team, issues of quality control, understaffing of pathology services, training and updating all levels of the profession to meet the increasing demand for pathology expertise in the face of rapidly evolving science and technology.

The fact that there are challenges to be faced is a mark of how much pathology in cancer has developed over recent decades. Before 1970, cancer pathology was based almost entirely on observing the morphology of cancer tissue under a microscope. With the development of immunohistochemistry, individual cell components could be identified, opening up the way to biological tissue characterisation and the identification of important biomarkers for diagnosis, prognosis and predicted response to therapy.

In the 1990s and 2000s, pathologists became able to measure oestrogen receptors and *HER2* status. Then as targeted therapies started to become available, molecular markers, which had previously been used for diagnosis and prognosis, became specific targets for interventions. As the age of precision medicine has developed further in the molecular era, the information provided by pathologists has become more directly important to patient treatment, capable of predicting the most suitable drugs and outcomes. “Cancer as a field is being very much progressed by the research and understanding being provided by pathologists,” he says. “The role of the pathologist is no longer simply in diagnosis, but in prediction and prognosis.”

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But this game-changing evolution of pathology has not always been reflected in an evolution in working practices.

A place on the team

Ten years ago, [talking to Cancer World](#), influential Italian pathologist Giuseppe Viale warned about worrying variations in pathology practice and standards across countries and across Europe. Too many pathologists, he said, were not involved in multidisciplinary teams (MDTs), effectively isolated from structures that could now drive work searching for specific targets and treatment options and help maintain and improve quality.

This is now changing significantly, says Al Dieri. Since becoming Director General of the European Society of Pathology three years ago, he has made it a priority to combat professional isolation, improve standards and nurture understanding, by raising the profile of pathology with all health professions. He has been an active participant at international cancer conferences and policy meetings, keen for pathology to be understood as a key cancer discipline alongside surgery, medical oncology, radiotherapy and other medical disciplines.

"I feel we need to be more engaged with our colleagues at other medical societies," he says.

"Personally, I feel that pathologists are no longer at the back-stage, but we need to be more visible."

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This applies also to the profession's involvement in MDTs. Yes, in some European countries it is harder to break down old professional hierarchies and structures. But generally, he says, there is now no choice. It is "only a matter of time" before the outliers fall into line. "Generally disciplines like oncologists and radiologists understand very well the importance of engaging pathologists if you are going to select the right treatment."


A place in cancer research

Ensuring the full pathology contribution is recognised within MDTs is intricately linked with collaborating with other professionals at all levels. Involvement with other professions in research, for example, is key not only to joint working for its own sake, but to raising standards and improving patient care.

Here, too, Al Dieri has a vision. "I would like to see pathologists more engaged in clinical trials," he says. Three years ago, under his tenure, ESP established a new [pathology research fellowship programme](#) in collaboration with the [European Organisation for Research and Treatment of Cancer](#). It recognises the central role of pathologists in clinical trials in the era of precision medicine and especially in the field of medical oncology.

Pathologists, he points out, are the custodians of the annotated biological samples used in biomarker-driven studies, ensuring all prerequisites for reliable molecular testing and reporting are fulfilled. So, in the era of precision medicine, involvement in clinical trials is intricately linked with the growing importance of quality control.

"I would like us to be more and more active in the field of quality control. At ESP we already provide quality assurance programmes in certain areas. I would like to extend this, with more laboratories participating not only in Europe but across the globe. Because, in the end, the organisation's vision is excellence in pathology for optimal patient care. What does patient care mean? It means the appropriate diagnostic tools interpreted very well in order to have the right diagnosis and the right treatment for our patients. I see challenges ahead, but I'm sure we'll be able to find our way through it and achieve our goals."

 **The European Society of Pathology, founded in 1964, aims to promote high quality diagnosis, practice, research and**

education, working through its congresses, journal, fellowship programmes, courses and quality assurance projects. It interacts with national pathology societies across Europe and has more than 20 working groups in specialist areas of pathology.

Reaching out

Before his appointment as Director General in 2017, Al Dieri spent five years as the organisation's scientific director. His background, however, is in pharmacology not pathology – which he sees as a strength when it comes to reaching out to clinicians and their organisations.

He brings to the job the experience of a long and distinguished research career, specialising in thrombosis and haemostasis, which took him deep into every area of laboratory diagnosis and into contact with every medical discipline. The understanding he gained about the mechanisms for diagnosis, prognosis and follow up, he says, helps him get messages across to medical colleagues. As he points out, there are few cancer specialists who will have not come across thrombotic complications.

The son of a vice director of a pharmaceutical company, from an early age Al Dieri felt “close to medications, the effect, how you have to handle issues,” and he studied pharmacy at Bachelor's and Master's level at Damascus University, before (on the basis of outstanding results) being appointed a teaching assistant at the university faculty of pharmacy. He was, he says, lucky to be educated at such a high-level university and academic hospital.

His whole family had a medical bent (his sister is an ophthalmologist) and was always outward-looking, regularly travelling and with many professional contacts and friends in Europe. So it didn't see too large a leap for him to go to Maastricht University, the Netherlands, to complete a doctorate in haemostasis and thrombosis in 1996. “I was very motivated to pursue mode of action and mechanism of diseases as well as new medications,” he says.

What followed was a productive research career during which he co-developed a new (and patented) method for measuring the coagulation system and the activity of anticoagulants. He then spent nearly ten years as Research Director of the Synapse Research Institute in Maastricht, supervising and conducting clinical and fundamental research.

This has stood him in good stead at the ESP – the critical thinking needed to head an organisation is the same, he says. “You need political and communication skills to lead an organisation, and I've also been able to bring what I learned in research and education to that. The multicultural and international collaborations I've been involved with have provided me with a strong platform for reaching out.

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“It’s about more than promoting a multidisciplinary approach,” he adds. “You have to reach out to the European Union and medical societies to address common issues, as well as the issues we face as individual professions.

A service clinicians and patients can depend on

Given increasing recognition of the contribution pathology makes to cancer treatment, one of the key issues facing Al Dieri since his arrival in the hotseat has been how to meet demand – both for pathologists themselves, and for highly developed skills in the molecular techniques that make them so crucial to good cancer outcomes.

Al Dieri is adamant that only pathologists have the ability to both identify significant characteristics and changes through molecular testing and interpret them in a morphological context. But the developing technologies and the increasing number of biomarkers now identified does make this an increasingly specialist area.

“We have to work very hard to make it possible for the current and new pathologists to get the appropriate training,” he says. “In Europe we are suffering from shortages of pathologists in general, and because precision medicine is now so important in cancer, we need to do something. ESP cannot really solve the problem itself. We need a European and international strategy and we need action at a national level as well.”

A key starting point is a robust technological methodology that meets requirements set by pathologists and molecular biologists. The tricky part is implementing quality control on that methodology, once agreed.

“You need to minimise or eliminate mistakes, because these can lead to disaster for the patient. This is why ESP is taking serious steps, like other pathology organisations at a national and international level, to provide [quality assessment programmes](#) for diagnostic molecular testing. Pathologists need to be tested for proficiency, at least on an annual basis.”

ESP is also providing postgraduate training programmes in molecular and histopathology. Al Dieri is all too aware that some countries are more able than others to address the challenges nationally.

“I can envisage problems if countries cannot provide training for young pathologists to be able to cope with the new information as well as emerging technical issues,” he says. There’s no need for every pathologist to become a fully-fledged molecular pathologist, but they do need to fully understand the methodologies, so that they can select and test samples adequately and then incorporate their morphological analysis with the molecular analysis in the diagnostic report.

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“Pathologists need to be engaged at every point of molecular testing: before, through and after. It is extremely important at the later stage when the resulting medication is prescribed to the patient. That is the vision. But it would take at least two decades to have this fully implemented, but on different levels, in different European countries.”

Education has always been at the core of ESP's activity, and coincidentally the organisation was already developing more interactive e-learning programmes and platforms before COVID-19 hit and the world seemed to go online. Al Dieri, ever the internationalist, wants these programmes to be a global rather than a European resource: the organisation's membership extends to 100 countries. He feels passionately about continuous education.

"Young pathologists need to be continuously supported," he says. "It's not a matter of doing something once and then feeling you're done. At ESP we feel a responsibility to act more aggressively in providing continuous education programmes. You need to be challenged at every level. Undergraduates, post-graduates, even certified pathologists, all need to constantly update their knowledge."

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Al Dieri lives in no doubt that there are hurdles to overcome: in cancer in particular, revolutionary technological changes and new concepts for treatment have brought the need for a seismic shift in mindset and structures. But, as he says, we are getting there. As we end our interview, he reflects on the situation in Syria, and his words reflect on his professional work too. "That's life. You have to live a certain amount of time with the challenges."