

# Peter Naredi: a ‘can do’ leader for Europe’s cancer surgeons

→ Marc Beishon

There are so many ways cancer surgeons can help improve outcomes, and Peter Naredi embraces them all. Adapting surgical approaches to the biology of a cancer, spreading best practice, using audit and transparency to raise the worst to the level of the best are things he’s tried and tested in his native Sweden. As ESSO president, he now hopes to enthuse Europe’s cancer surgeons to follow his lead.

**A**s surgery is the pivotal treatment for many types of cancer – and will remain so for the foreseeable future – one might expect that the discipline of surgical oncology would be well entrenched in national practice around Europe by now, especially as so much surgery concerns cancer. But that is far from the case, reports Peter Naredi, the current president of the European Society of Surgical Oncology (ESSO). As he notes, it is only a recognised speciality in a few countries, and there is much more to the cancer surgeon’s role than just carrying out operations.

“In many hospitals – such as in northern Sweden, where I am based – there may be few medical oncologists, and surgeons are most likely to be the ones leading patients through their cancer journey,” he says. “What we are emphasising at ESSO is the need for surgeons to participate in quality and educational programmes to raise standards in oncology surgery, and the establishment of multiprofessional centres and regional working so that patients have the best outcomes, not just from surgery but in

other areas such as diagnosis and end-of-life care.”

As he adds, there is now an unstoppable movement towards auditing and publishing outcome data for hospitals and even for individual surgeons in certain countries, driven by politicians and patient groups. As a result, the variability of cancer outcomes will become more apparent. Data from registries and results from multicentre trials already show “remarkable” differences between institutions and between treatment of different tumour types around Europe, and surgeons are most often taking the lead in diagnosis and care.

It might be expected that, with surgery becoming more specialised and with many surgeons focusing only on specific areas such as urology or head and neck, the quality of cancer treatment would be an integral part of this trend. But organ-specialist surgeons do not necessarily have a detailed and up-to-date knowledge of cancer, for instance its biology and multiprofessional care, which means patients may receive suboptimal treatment, says Naredi. “What Europe lacks is the implementation of a core curriculum in surgical oncology, which we have



developed at ESSO, and also the integration of organ-specialist societies and national bodies into ESSO and other cancer societies.”

Promoting the ESSO core curriculum is a current priority for Naredi and colleagues, as is widening the society’s membership to embrace national surgical bodies and powerful groups such as the European Association of Urology, which alone has about 12,000 members. Audit and quality assurance is another priority, for example through the European Registration of Cancer Care (EURECCA) project, which was set up by ESSO and adopted by ECCO initially to audit colorectal cancer surgery around Europe, and which could be a framework for other tumours (see [www.canceraudit.eu](http://www.canceraudit.eu)).

Naredi, whose day job is professor of surgery at Umeå University, not far from the Arctic Circle in Sweden, is himself an ideal case study of developing surgical and multiprofessional excellence in one of Europe’s outposts. Since Sweden decided to estab-

lish six regional cancer centres, each focused on key teaching hospitals, the northern region based around Umeå has become recognised as one of the more innovative, despite two other regions starting much earlier. “This is not primarily about more money,” says Naredi. “Yes, we can make say a 10% improvement with more funds, but we can achieve 30% by improving what we already have in terms of the process of getting people with cancer symptoms diagnosed and treated faster and better in the right places.”

As a general surgeon who specialises in the ‘mid-GI’ area – especially the liver and pancreas – he has helped introduce new techniques to Swedish surgical oncology. Naredi also has a research background in basic science and continues to carry out work in areas such as immunotherapy and chemotherapy resistance. And as part of a general surgical team in Gothenburg, he was routinely involved in caring for people with diseases such as stage IV melanoma. This has given him good grounding in the challenges of

improving multidisciplinary care and attracting talent to a regional university hospital.

Above all, he adds, healthcare bureaucrats need to allow clinicians such as surgeons the freedom to introduce evidence-based structures that will improve cancer outcomes, and not force through change that disempowers people. Naredi speaks from experience here: he enjoyed a good deal of autonomy while at Sahlgrenska hospital in Gothenburg, one of Sweden's leading institutions, until a merger of three hospitals created too much middle management, prompting him to leave along with other colleagues.

"But for our part we need to show leadership," he says. "We are in fact running leadership courses for young surgeons in Sweden, under the Swedish Surgical Society, because our profession has to be able to tell the politicians and administrators what is best in healthcare." It's also about painting a vision of what surgeons of the future should be doing, he adds, as there is a degree of insecurity about their roles.

Naredi acknowledges that the European cancer world has not lacked strong characters, particularly from

the surgery side, where there have been quite a few outspoken and sometimes controversial senior figures. But like many of the younger generation who have stepped up to senior level now in oncology, he favours a non-hierarchical, consensus-building approach that motivates rather than forces other people to participate. In his world, there is no room for the all-powerful chief surgeon who dominates decision making.

He was the first in his family to become a doctor, influenced by his mother, who worked as a Red Cross nurse. "I wanted to be an architect at first, but when I saw the kind of work I might be doing, such as interior design in banks, I knew I wanted to do something more meaningful and I've never regretted doing medicine. I chose surgery because I'm a practical person."

After a residency in Halmstad he moved to be a ward physician in the department of surgery at Sahlgrenska hospital in Gothenburg, where he was able to carve out a dual surgical and research career, focusing on cancer. "I was doing general surgery but found I was learning much more from cancer patients than say those who were having gall bladder or hip

A specialist at work. A minimalist approach to treating liver metastases, which Naredi helped to develop, has resulted in significantly more patients becoming eligible for treatment



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replacement operations. Everyone with cancer has a different life story and there are so many feelings involved. You have to listen carefully to improve outcomes for survivors – nine out of ten women with breast cancer in Sweden now survive. We also need to listen to those with poor chances, such as those with pancreatic cancer, where we need to know how to provide good palliative care. Treating people with stage IV melanoma, who have miserable outcomes, has taught me more than any course.” Patients need one doctor who can put together a multiprofessional package, he says. “We shouldn’t keep sending them to see different people to take control of their care – they need confidence in one person.”

In the 11 hospitals that comprise the regional cancer centre in northern Sweden, Naredi says only two have a department of medical oncology. “Medical oncologists come to the other hospitals as consultants and may see up to 20 patients in a day, but who takes care of them afterwards? In the vast majority of cases it is the surgeon who will be seeing patients over a period of several months, which is why it is so important they have knowledge of surgical oncology.”

As Naredi explains, surgical oncology is of course about excellence in treating solid tumours (although not in the brain, which is the domain of the neurosurgeon), but it also includes prevention, genetic counselling, diagnostic and staging procedures, rehabilitation and follow-up care. And treatment for the surgeon does not just mean resection, but also gaining a thorough understanding of the biology of the diseases and the use of chemo- and radiotherapy.

“At ESSO we have both a core curriculum and a European examination from the surgical section of UEMS [European Union of Medical Specialists], which takes place at either our own conference or at the European Multidisciplinary Cancer Congress every other year. I was on the committee that updated the core curriculum, which can practically be done over six years, although I could write a curriculum that would last a lifetime.

“I do not think it is important to push for more

recognition of surgical oncology around Europe, but we do need to get more surgeons interested in the biology of cancer and all the other aspects of treatment and care. We need more good surgeons who understand oncology – not just dedicated surgical oncologists.”

A surgeon can be specialised in one organ, say breast, but still learn about techniques developed in other areas such as the pelvis, says Naredi. All surgeons need to keep up to date now with new drugs such as targeted therapies, and the core curriculum, he emphasises, is as much about giving hospital departments a framework to be a surgical oncology teaching unit as it is about individual learning. As he points out, there is no validation and accreditation of such teaching capability as yet.

“We have tried to give the ESSO curriculum the same format as the ones from ESMO [for medical oncologists] and ESTRO [for radiation oncologists], so that ECCO’s member societies have standard curricula,” adds Naredi. “But as with recognition of our speciality, I’m not a big believer in thinking that you can just impose it at national level – we have to work with people who join and interact with ESSO to take it home and adapt it for their own surgical societies and institutions.

“We are not specifying detailed surgical procedures in the curriculum, just guidance on the number of procedures. The latest hands-on learning does not belong in the curriculum. For example, in Sweden we invited Bill Heald from the UK to lead sessions on TME [total mesorectal excision] for rectal surgery, which then made its way into national guidelines from our colorectal surgical society. Our aim at ESSO is to promote the tools for implementing such best practice.”

Naredi himself benefited from excellent surgical mentorship at Gothenburg, but also has a strong research background, having taken up a fellowship at the University of California in San Diego, where he studied chemotherapy resistance (mainly cisplatin), and he also has a PhD in tumour blood flow. He has a long collaboration with Swedish tumour immunologist Kristoffer Hellstrand on the use of histamines

**A CURRICULUM FOR SURGICAL ONCOLOGY**

ESSO has put forward its core curriculum to try to tackle the *ad hoc* way in which surgeons usually receive oncology training – few countries have formal national training programmes. Naredi and colleagues note that the European Board of Surgical Qualification in surgical oncology, from the European Union of Medical Specialists, is probably the only formal qualification in Europe, but only five to ten surgeons take this exam each year.

The ESSO curriculum aims for an evidence-based approach rather than the existing ‘common sense medicine’ now in place, and should join successful curricula from ESTRO (the radiation oncologists) and ESMO/ASCO, they say. It includes:

- Recommendations that institutions should combine if they cannot offer access to facilities such as basic cancer biology facilities
- A minimum of three surgical oncologists who teach
- A basic scientific curriculum that includes cancer biology, immunology and principles of treatment
- Evaluating and conducting clinical studies and understanding the ‘principles and pitfalls of evidence-based medicine’
- Basic clinical requirements such as diagnosis and prognosis, implementation of national guidelines, palliative surgery and management of end-of-life feelings
- Cancer surgery itself – at least 120 cancer operations is recommended, at least half done by the trainee
- Rotations in medical oncology and radiotherapy.

The full curriculum, which Naredi says will be revisited soon to see if it needs updating, was published in 2008 in *Surgical Oncology* (vol 17, pp 271–275).

and interleukin in inhibiting tumour growth, which led to Naredi being the principal investigator in several global phase III studies, although a lack of consistent interest from drug companies has meant this work has been very drawn out.

“As a young surgeon I was carrying out immunotherapy as well as surgery on patients with melanoma and renal cell carcinoma, and I kept up research in this area and in cisplatin resistance when I moved to Umeå,” says Naredi. “But some other science our surgical department is involved in can seem odd – for example with colleagues in the molecular pathogenesis centre we had a paper in *Cell* in 2007

on the regulation of insulin in *C. elegans* worm cells.”

Such work is way beyond the surgical oncology curriculum, although it does specify that a trainee should prepare at least one scientific paper, either original research or a review or meta-analysis.

When Naredi was in San Diego he suddenly got three great job offers: to take a senior colleague’s place in Gothenburg, move with the colleague to Umeå, or stay in San Diego. “I chose to go back to Gothenburg as an assistant professor, where I could continue to benefit from great surgical leadership and also continue my research, and had some great years before the merger changes prompted me to move to Umeå.”

Naredi began to specialise in liver surgery, a discipline on which he is now a leading authority, encouraged by Tore Schersten, a leading surgeon at Sahlgrenska. After focusing on conventional surgery for removing metastases, where entire lobes are usually resected, he has taken on a method pioneered in France, in particular by Bernard Nordlinger, in which smaller sections around tumours are taken rather than whole lobes, which Naredi calls the ‘Swiss cheese’ method.

“As long as you keep 30% of the liver you can take many different parts with this method, and we know now we do not have to leave large margins around the tumours, only up to two millimeters, not the centimeter or so we thought before. It’s not that patients necessarily do better than with whole lobe resection, but we don’t have to exclude as many people, and we can operate again and again on recurrences.”

Even so, only one in five patients is currently suitable for resection, often after chemotherapy to shrink metastases commonly spread from colorectal cancer, but Naredi reports that, in recent years, five-year survival rates for this group have advanced from 40% to 50% in centres such as Umeå, and even to 60% in some patients, and such improvement is significant because late-stage colorectal cancer is common so there is still a large population to target. “The ‘Swiss cheese’ method is the result of understanding biology, and is the way we should be doing things in the 21st century. My second liver surgeon here is hardly doing any lobe resections now, and we can aim for more eli-

“The ‘Swiss cheese’ method is the result of understanding biology, and is the way we should be doing things”

gible patients in the future, maybe as many as one in three. It's like the way surgery for breast cancer has moved to partial removal – more is not always better for primary tumours and for metastases too. Rather than taking away more to feel safe, we must learn more about the biology. But like any recent technique, we need to market it to get it into widespread practice, just as the pharmaceutical companies market their drugs. It is more usual now, but I'm still giving talks and writing articles about it.”

Naredi adds that the liver is a challenging organ with a great deal of three-dimensional complexity, which is why he was attracted to its surgery, and there are other treatments such as perfusion and ablation to consider. There is also a lot to do in trial work on liver metastases and colorectal cancer. Testing the impact of certain neoadjuvant (pre-surgery) treatments is one important area – he mentions the European EPOC study as one such trial. Other strategies that merit being tested in trials include removing metastases before the primary tumour and after chemotherapy, in the expectation that there is a better chance of eliminating cancer spread.

“My other main surgical work is in pancreatic cancer, where we have improved greatly the number of patients we can operate on. Earlier, we were doing a Whipple procedure on only a few people – now we are doing as many as 40 operations a year at Umeå. We have better work-up with MRI and CT, and surgically we have quality and skills we didn't have 15 years ago.

“But the problem of course is that we are detecting only one in five in time and, of those

we operate on, only 20% are alive after five years, which is only four or five out of 100 overall. We must find it earlier and we need biomarkers and better treatments – but in Sweden as elsewhere pancreatic cancer gets very little funding and advocacy. I don't care much about a 2% increase in survival with a new drug – a huge area for research in my view lies in early detection and better use of imaging technologies, as well as effective treatments.”

He notes though that there could be genuine practice-changing progress in one of his long-standing interests, melanoma, where two targeted drugs have recently been approved in the US. And on the surgical side, he mentions strong results for sentinel node trials in both breast cancer (Armando Giuliano's work in the US) and melanoma (the MSLT-I/II trials).

After escaping from Gothenburg, where he was faced with too much aimless administration, Naredi went to Umeå as an assistant professor, and then in 2003 he became a full professor and chair of the department of surgery. “It was more like a county hospital when I arrived – now it is a much larger university institution and Umeå is a fast-growing college city. I don't regret the move up here for one minute – and we have had no problem attracting young doctors and researchers here.”

Apart from helping to develop the academic hospital, a key advantage, he adds, has been the ability to shape Sweden's northern regional cancer centre around its major hospital, at Umeå. “Although our government has made mistakes in forcing hospital mergers – small places still need hospitals in



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On the helipad. Helicopter access is essential for this regional specialist centre, which serves a huge territory, much of which is covered in snow for five months of the year



## “A huge area for research in my view lies in early detection and better use of imaging technologies”

my view – the criteria for the six regional centres, such as on education, structure, research, the cancer journey and patient participation, has promoted competition on quality. We know that if we don't improve quality we could lose patients to other regions.”

Naredi says there is now much effort spent on trying to iron out the weak points in multiprofessional working. Rather than just a narrow multidisciplinary tumour board, he says, there is wider participation at meetings. “I may be the one who understands liver metastases and the best way to do surgery, but we jointly make the decision as to whether the patient should have the treatment or not. We involve the patient's personal doctor, who often knows them best, and we need people such as community nurses to tell us if a patient is depressed or in pain – the rest of our approach could be great, but if we miss factors like this the person has a terrible quality of life.”

After some struggle with the IT people, Naredi and colleagues also now have access to high-quality videoconferencing facilities, vital to bringing more people at various locations into meetings where they are all expected to play a role in decision making.

A big and stubborn challenge, as in most countries, is how to reduce the numbers of patients who are not referred or diagnosed fast enough. But Naredi feels the various elements now combining will make an impact on the roughly 1 in 10 patients for whom the process is currently not working, for instance because referrals are not made for an expert appraisal for surgery where the patient would have been eligible.

One element is use of data, which he says Sweden

excels at. Cancer and death registry data are among the most complete anywhere, and hospitals can be interrogated on say tumour-specific data that are missing from the cancer registry but where cancer is present in the death database. But cancer registry data are strong and are largely driven by surgeons, notes Naredi, who mentions the colorectal surgeon Lars Pählman in Uppsala, featured in the December 2004 issue of *Cancer World*. Pählman has been outspoken about using an initiative he helped to develop – the Swedish rectal cancer registry in 1995 (which now also covers colon) – to cut underperforming centres and surgeons for one of the tumours for which treatment quality remains highly variable.

This had remarkable results, with surgery feedback alone promoting better outcomes for rectal than colon cancer, despite the latter benefiting from new chemotherapies. “I'm not as forceful as Lars – I think surgeons are competitive anyway and will take it on themselves to either raise their game or stop if they consistently figure at the bottom of outcomes,” he says.

Palliative care is also getting its own national registry, according to Naredi. “There are more funds from government going into this now than to other cancer registries and it will help us measure where we can improve factors involved in quality of life.”

He adds that the structure of the regional cancer centre allows patients to be genuinely represented at board level. “They can say if they are unhappy with the way care is managed. It's not like sending a complaint letter – they are part of the process.” The general population in northern Sweden is also involved in one of the country's strongest biobanking projects. “We have 100,000 people who give blood at the ages of 40, 50 and 60, and among them we have identified people who later were diagnosed with pancreatic cancer. We have some unpublished work on possible pancreatic cancer biomarkers from this unique biobank.”

And in any case Sweden does best overall for cancer according to the EURO-CARE-4 dataset, so it is no surprise that other countries are looking to emulate best practice, say in tumour-specific



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networks such as breast, sarcoma and colorectal.

Swedish surgeons, says Naredi, have more political clout via the Swedish Surgical Society than counterparts in the country's medical association, and he says this more heavyweight presence applies at European level too, and will help bring more surgeons into ESSO. "We have a stronger voice at European level than the organ-specialist societies, which is one reason why I feel they will want to come under our umbrella. We are talking at present to leaders of the European Association of Urology and others in head and neck, hepato-biliary and gynaecology societies and so on about their members joining ESSO – most are not currently individual members – so they can have open access to our conferences and courses as well as adding to our political voice."

ESSO currently has about 2600 members and has grown recently thanks to a policy of inviting national society members to join. The last ESSO conference in 2010 in Bordeaux attracted nearly 900 people. Naredi adds that the European Association of Urology is likely to be the first European organ-specialist group to align itself with ESSO, which could give oncology a huge boost on the continent by addressing the poor treatments that occur in some countries thanks to the 'suboptimal' oncology approach seen in certain specialities.

Like presidents of other European oncology organisations, Naredi is keen to get more young people involved, and mentions women surgeons especially. "We spend a lot of our resources now on educational events and conferences, also in collaboration with other societies. Good examples are the Flims fellowship courses and the ESO–ESSO masterclasses, which are not necessarily pitched at elementary levels but at experienced surgeons too." A young surgeons and alumni club was launched at the 2010 ESSO conference.

And like the heads of other societies, he is robust in promoting the all-round qualities of members. "I have no problem with surgeons doing systemic therapy – as many countries, like Sweden, do not have regular medical oncologists. ESMO likes to talk of the

superiority of medical oncologists, but I have not seen any studies saying it is right. We are far more experienced in intraperitoneal treatments, for example. But of course in large centres it will be mostly medical oncologists administering systemic therapies, although in Sweden they are also radiotherapists. Like the UK we have the clinical oncologist speciality, and practice does vary around Europe."

That may not endear him to ESMO colleagues, and he is concerned too by the lack of trials currently run by another ECCO member, the EORTC. "ESSO does not do its own studies and we should be running them through the EORTC, but at present it has very few of the trials we are running and it needs a refresh, otherwise we may think about doing our own pan-European research."

With ESSO past-president Cornelis van de Velde now president elect of ECCO, and Naredi also an ECCO board member, surgical oncology does seem to be in the ascendancy in Europe. "I am also president of both the Swedish and Nordic surgical societies – but it is most important now to be involved at European and global level if we are going to improve oncology, and ECCO is the right organisation for unity and strength."

Naredi is married to Silvana, a fellow professor at the university, and a neuro intensive care specialist, and they have two children, one in medical school. Like many Swedes, he's big on outdoor pursuits such as cross-country skiing – just as well as even in April the river in Umeå is still frozen solid.

His plan is to continue to develop the regional centre at Umeå and especially the education and leadership side. "It takes years to get the quality you want in oncology and we must have continuity from the educational system and train young doctors to be leaders," he says. In Europe, he also has no doubt there will be a big expansion of ESSO as the organ-specialist societies come on board, and he will continue to work on educational courses and quality, such as with the European audit project. And quality also applies to time: anyone who books a meeting with Naredi that doesn't have a key objective had better watch out.

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