

# Closing the gap with the West

→ Janet Fricker

Polish surgeon **Marek Nowacki** has always had a very dynamic approach to cancer care, travelling extensively to pick up new tricks and techniques, and publishing his own innovations to spread the benefit. Today, thanks to his vision and drive, the rest of Europe could learn some important lessons from Poland, not least on implementing effective colorectal cancer screening.

**C**losing the cancer treatment gap between Eastern and Western Europe has been the overriding career goal of Marek Nowacki, a surgical oncologist from Poland. Due to retire from his post as director of the world famous Maria Skłodowska-Curie Memorial Cancer Centre, Warsaw, in August 2009, Nowacki at last feels on the cusp of achieving his lifetime ambition of parity for Poland. But the clouds of the international economic depression are now casting their shadow further East, and placing this goal in jeopardy.

In the world of medicine, Nowacki is an undoubted heavyweight – director of the cancer centre founded by Marie Curie herself (originally known as the Radium Institute), first author of more than a hundred papers on cancer surgery, with a strong track record of surgical innovation, chairman of the National Board of Experts in Oncology between 1986 and 1997, and recently nominated the fifth most influential person in Polish medicine, by the respected monthly magazine *Puls Medycyny*.

But his success in bringing forward his vision for Poland stems as much from his work as a

campaigner and advocate, not least through the Polish National Cancer Campaign, which he was instrumental in launching, three years ago, to convince the government to ringfence money for screening programmes in cervical, breast and colorectal cancer.

As a gastrointestinal cancer specialist, himself, as well as a member of the council of five spearheading the campaign, Nowacki is particularly pleased that Poland now leads the way in screening for colorectal cancer. Today, everyone between the ages of 50 and 65 is offered diagnostic colonoscopy, in preference to the less accurate faecal occult blood tests used in many other European countries. And the benefits are already evident. Despite increasing numbers of colon cancer cases – which may be due to the widespread adoption of Western diets – mortality remains stable, with data from the last registry (published February 2009) even showing a tendency to decrease.

With 200,000 people now having been screened, Nowacki is convinced the programme offers the explanation. “We showed that 20% of the people screened have polyps and adenomas that are

precursors of cancer. By removing them we can offer almost 100% protection against cancer. It offers real advantages over faecal occult blood tests, in that you get an immediate accurate answer, and provide the treatment there and then," he says.

The ultimate accolade came two years ago, when he compared five- to ten-year survival rates for colorectal surgery at the Maria Skłodowska-Curie Memorial Cancer Centre, with his friend Stanley Goldberg, a surgeon from Twin Cities, Minneapolis, and found they were the same. "It's a matter of national pride that we're doing something in a post-communist country that can be judged alongside the US. We've closed the gap in one particular institution and one particular surgical team, but not the whole country. There's still a lot of work to be done," he says.

#### A WARTIME CHILDHOOD

Born in March 1938, in Katowice, Poland, Nowacki describes his first year of life as extremely 'comfortable'. His father, Paul John Nowacki, was a celebrated professor of electrical engineering, who had previously been posted to Germany to supervise the building of power stations. Then in September 1939, Germany invaded Poland. Refusing to cooperate with the occupying forces, Nowacki senior was forced to flee Poland in fear of his life, leaving behind Marek and his mother Stefania (then pregnant with his younger sister). Trekking over the mountains through the 'green border' to Czechoslovakia, Paul John finally made his way through U-boat infested waters to England.

There Paul John enjoyed a distinguished war career. His electrical engineering knowledge, combined with his ability to speak German 'like a native', made him the





Support from the top. Maria Kaczyńska, Poland's first lady, set a good example last year when she visited Nowacki's institute for a highly publicised mammography screening

ideal candidate for top-secret sorties to the Channel Islands to capture radar equipment. Based at the Royal Aircraft Establishment at Farnborough, he also helped design and model aircraft radar equipment that was to prove so important in the battle for the skies. And of course his insider knowledge of German power stations proved invaluable to the allies.

Life for Nowacki, his mother, and sister Irena was far from easy. "We were continually on the move, trying to escape oppression from the Germans," he says, adding that his mother helped the underground movement, where she could, as a nurse. "I don't much like talking about the war. I've got a photographic memory of atrocities committed by both the Germans and Ukrainians, and still get flashbacks to dead people on the streets and fires ignited by invading armies."

Nowacki is still struck by his family's miraculous survival, when so many of their fellow countrymen

perished. But once the war was over there remained the challenge of the Russian occupation and continued separation from their father, who was being 'debriefed' by the British, but had managed to make contact through the Red Cross. He recalls being crouched down in the bowels of a boat when the family attempted an escape from Poland in 1946. "Officially we were on a day trip. But a storm blew up in the Baltic sea and we had to abort." In 1947 Paul John was finally allowed to return to Poland, and was reunited with his family.

Nowacki started elementary school at seven, and remembers his anger at having to take lessons in Russian. "After early struggles with writing I became quite a reasonable scholar, particularly enjoying physics and

the Polish language," he says, adding that as a teenager his main interests were sailing and competitive running. There was tension at home – his father urged him to study engineering, while his mother wanted him to be a doctor. "Eventually mother prevailed. The fact that I'd been greatly impressed by reading scientific papers by my parents' medical friends tipped the balance."

Against fierce competition he gained a place to study medicine at the Warsaw Medical Academy in 1956. From the outset, Nowacki was attracted by the scientific challenges offered by oncology, and being 'of a practical bent', he felt his abilities best suited to surgery. "Radical treatments with fast cures appealed to me. Then, as now, surgery is the most reliable way of achieving a cure with cancer. I like the challenge of having to think on your feet. No two bellies are ever the same, so as well as being manually skilled, surgeons need to

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be inventive and prepared for the unexpected.”

Aside from international exchanges, which figure prominently on his curriculum vitae, Nowacki has been continuously employed by Maria Skłodowska-Curie Memorial Cancer Centre, in Warsaw, since April 1965. “Being lucky enough to start out my career at the premier cancer centre in Poland, there’s been no incentive to move,” he explains.

### AN INTERNATIONAL TRAINING

His former boss, Tadeusz Koszarowski, whom he describes as “a visionary, ahead of his time”, appreciated the importance of learning surgical techniques ‘hands on’ and did his utmost to facilitate international sabbaticals. “We were helped by the fact that he was a brilliant diplomat and, despite not being a party member, established good relations with party officials when he treated them,” he says, adding that foreign travel proved mired in bureaucracy. “You had to get special permission from the minister of health, who would then issue you with a service passport that only allowed you to travel to one country.”

Attracted to colorectal cancer surgery “because it was more optimistic than stomach cancer”, Nowacki worked first with Leandro Gennari at the Istituto Nazionale Tumori, in Milan, where he honed his skills in gastroscopy and colonoscopy – two techniques that he brought back to Poland.

Other sabbaticals followed. Between 1974 and 1975 he had a year’s residency in Buffalo, New York; in 1980 he worked for six months at the Case Western University, Cleveland, Ohio, and then in 1988 worked at the State University of New York at Stony Brook. “It’s the detail of the techniques you learn in surgery abroad that’s important and can make all the difference to patient outcomes,” he says.

Throughout his career, Nowacki has brought innovation to surgery by pulling things together. “It was a case of observing. When you’re doing procedures in different parts of the world on different parts of the body you learn a few tricks that you can apply in different areas,” he says.

One such procedure was the fish-shaped incision that he developed for mastectomy in the late 1980s, which in some circles has come to be known as the ‘Nowacki incision’. To avoid problems like the ‘dog ear’ deformity, that can result from excess skin, he evolved a technique that involved adding two triangles to the lateral tip (making the incision resemble a fish).

In the US he was much impressed by the free market, and on one occasion felt highly tempted to stay, but returned to Poland to care for his ailing mother, by then a widow. “I only survived the war thanks to her, and felt I should be there when she needed me,” he says.

While ideologically opposed to communism, Nowacki concedes that cancer care was very well organised in Poland. From the early 1950s cancer care was structured along the lines of comprehensive cancer centres, which were spread widely throughout the country, with the idea that patients should not be forced to travel far from home for treatment. But the insurmountable downside was poor access to modern drugs and technology. “We had to apply on an individual patient basis to get expensive drugs from the minister of health,” he says.

### A DUTY TO PUBLISH

Nowacki has always appreciated the importance of describing surgical techniques and can boast an extensive list of publications, many in English. “Most of my publications are practice-orientated, describing how to perform techniques. Many surgeons do beautiful work, but don’t publish because they feel descriptions of surgery don’t fit with the classical idea of scientific papers,” he says. “But the bottom line is that if you believe your ideas can help patients, publication disseminates information, enabling you to reach far wider audiences.”

Appointed director of the Maria Skłodowska-Curie Memorial Cancer Centre in 1999, Nowacki’s winning vision was to introduce new technology and more clinical trials to the institute. Today he heads up a faculty of 2,400 employees, including 300 doctors and 200 researchers.

## One innovation especially close to his heart is the introduction of endoscopy nurses

The sheer volume of patients catered for by the centre is enormous – last year alone nearly 270,000 attended out patient clinics, 8,000 had major surgery and 22,000 day therapy. “We’ve placed great emphasis on shortening the length of hospital stay. It’s not only about costs, but quality of life,” he says.

In post, Nowacki has championed the training of nurses, encouraging them to take degrees. “Nurses can be real partners for doctors. In surgery, where doctors spend many hours in the theatre, nursing skill is vital for patient survival,” he says, adding that he is particularly proud that the number of nurses taking degrees has increased 100 fold in the time he has been director. One innovation especially close to his heart has been the introduction of endoscopy nurses, carrying out endoscopy under the supervision of doctors.

His job is a constant struggle for financial resources, and his signature is needed for every aspect of the budget. During our conversation he seemed to be interrupted every few minutes with vital papers that needed signing. “It’s altogether the worst part of my job,” he says with a sigh. “But it’s a means to an end, because without it we wouldn’t get the money.”

Financial pressures were alleviated somewhat with

the recent recognition from the Department of Health that funding levels must take into account the fact that the cost of living is higher in Warsaw than the rest of the country. “We narrowly avoided a very dangerous situation, because the doctors were planning a strike.”

But he is clearly worried about the future. “The National Health Fund is financed by employers, so if unemployment rises, less and less money will be collected. I see this as a really dark scenario that could result in limitation of services,” he says.

The only chink of light is that the downturn is leading to a ‘reverse brain drain’, where doctors are returning from places like the UK, Spain, Ireland and Sweden, bringing back with them both their overseas expertise and increased knowledge of languages. Nowacki also sees some salvation in the progress of molecular science and personalised medicine. “If we know the patients who are likely to benefit from treatment it will be easier to make a strong financial case,” he says.

Nowacki’s personal life has been dominated by the complexities of having three children by three different mothers – Malgorzata (born 1962, a linguist), Piotr (born 1972, a biologist) and Maria (born 1996, and still at school).

His first two marriages (to a gynaecologist and a radiologist) ended after career paths diverged, and today he lives with his partner of 15 years, Malgorzata, an anaesthetics nurse and mother of Maria. “It’s a really nice experience to have a young child when you’re my age, because you’re forced to do energetic things that you wouldn’t necessarily choose, like going on long family bike rides,” he says.

With impending retirement, Nowacki faces his own financial uncertainty. “Pensions were low under communism, so I’ll



Family man. On holiday in Krakow with his youngest daughter Maria, his oldest daughter Malgorzata and her husband (on the left), and two of his grandchildren, Alexandra and Matthew (on the right)



undoubtedly have to do some consultancy to earn a living,” he says, unsure of whether he will be able to afford his dream of visiting sister Irena (who emigrated to the US in 1970) and his two adult children and their families, now all living in Canada.

But before he bows out, he wants to solve the mystery of a paper he published in 2005 in the *International Journal of Colorectal Disease*. The paper showed that patients undergoing colorectal surgery randomised to have a gentamycin sponge placed in their pelvic cavities had a lower risk of postoperative complications, no differences in local recurrence rates and, most surprising of all, a lower rate of distant metastases.

“The metastases data came as a total surprise,” says Nowacki, who believes one explanation may be that circulating cancer cells interact with the collagen material within the sponge. Currently he is undertaking a second trial to see whether he can replicate the results in 100 patients.

**Sunset over Puszcza Kampinoska. Capturing the beauty of nature on camera offers Nowacki a break from the emotional side of oncology**

Four slipped discs have put paid to his hobbies of running, tennis and skiing, but he is still an enthusiastic and impressive photographer, having been a member of the Union of Polish Art Photographers since 1965. His work is dominated by images of Polish landscapes.

Photography, he claims, has many parallels to surgery. “It’s an art form, but you need technical expertise to be able to do it, and you need a real understanding of your equipment,” he says, adding that he intentionally never takes photographs of people. “Photography is my down time, it has provided me with a totally different outlet. Because I want some escapism from the emotional side of oncology I feel much more comfortable photographing nature.”

“Photography, like surgery, is an art that needs technical skill and an understanding of your equipment”