

# Alexander Brunschwig: a pioneer of radical cancer surgery

This year marks the 50th anniversary of the death, in 1969, of Alexander Brunschwig, surgeon at the Memorial Hospital for Cancer, New York. He was a leader at that time in the practice of what might be called ‘super-radical surgery’ for advanced cancers.

In the years following the Second World War, patients with malignant disease commonly presented to the doctor with what today would be regarded as an advanced stage of the condition. As a house surgeon in 1948, I became all too familiar with women attending the outpatient clinic with large, even ulcerated, breast cancers and with enlarged involved axillary nodes. Alimentary tract cancers often presented with a large abdominal mass, or ascites and hepatomegaly. Radiotherapy was far less sophisticated than it is today and, apart from stilboestrol for advanced prostatic cancer, chemotherapy and hormonal treatment did not exist.

At this time, a number of surgeons, especially in the USA, and particularly at the Memorial Hospital for Cancer, New York, were pioneering radical surgical excision of the tumour.

For example, Jerry Urban, head of the Breast Cancer service at the Memorial, reported his operation of ‘super-radical mastectomy’. In addition to the conventional radical operation – wide excision of the breast and pectoral muscles and radical clearance of the axilla – he also removed the internal mammary chain of lymph nodes by removing part of the sternum together with the medial parts of the second to fifth rib, repairing the large bony defect by deep fascia taken from the thigh. The operation took 5 hours and required a 3-pint blood transfusion.

At the same hospital, Hays Martin was performing bilateral mandibulectomy and bilateral block dissection of the neck, the so-

called ‘commando’ operation, for advanced tumours of the floor of the mouth.

The best known of this coterie of surgeons was Alexander Brunschwig. Brunschwig was born in El Paso, Texas, in 1901. His parents were immigrants from Alsace-Lorraine. He studied biological sciences at the University of Chicago, gaining his Bachelor of Science degree in 1923. His medical education was at Rush Medical School, Chicago and he graduated Doctor of Medicine with honours in 1927. He then spent a year in the department of pathology performing autopsies, particularly in cancer patients. His surgical training was carried out at the University of Chicago and also in Strasbourg – he was fluent in both French and German.

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It was in Chicago that Brunschwig first demonstrated his aggressive approach to cancer surgery. In 1935, Allen Whipple, Professor of Surgery at Columbia University, New York, published the first report of an en-bloc resection of a carcinoma of the head of the pancreas. This was a two-stage procedure, with a preliminary cholecyst-jejunal anastomosis, followed by a later resection of the tumour. In 1937, Brunschwig reported the first one-stage resection of such a tumour; perhaps he should replace Whipple for the eponymous name of this operation.

Brunschwig was appointed Professor of Surgery at the University of Chicago in 1940. In 1947, he moved to the Memorial Hospital for Cancer, New York, as Head of the Department of Gynaecology. In the same year he published his textbook ‘Radical Surgery in Advanced Abdominal Cancer’.

It was dedicated to his wife, Leah, herself a doctor, who gave up her career to be her husband’s greatest support.

In 1949, Brunschwig published a report of his first 22 resections of advanced uterine cancer in *Cancer*. This involved total hysterectomy, bilateral salpingo-oophorectomy, abdomino-perineal excision of the rectum, total cystectomy and dissection of the pelvic lymph nodes. The ureters were implanted into the colon, leaving the patient with a ‘wet’ colostomy, draining both urine and faeces. The denuded pelvic cavity was packed with gauze, which was removed by the surgeon himself on the third postoperative day under pentothal anaesthesia. Brunschwig himself described the operation as ‘cruel and brutal’, but he reported 116 5-year survivals among his first 562 patients.

Brunschwig was a kindly man, whose aim in life was to relieve the suffering of patients with cancer. He had no time for the man who combined the practices of both obstetrics and gynaecology, and was much against radiotherapy and radiotherapists. He had a wide experience of cancer patients presenting to him having failed to respond to radiotherapy or who had been damaged by injudicious treatment. However, it must be remembered that this was much before the present era of sophisticated super-voltage machinery, able to focus under computer control onto a strictly defined anatomical area of the body.

Similarly, he held in contempt the cytotoxic drug therapy available in those early days of their development, saying ‘more people make a living giving chemotherapy than are cured by it’.

Brunschwig aged badly in his later years; a photograph taken of him at the age of 67 years, in the year that he died, shows a wrinkled, bald old man. The end came when he collapsed in the operating theatre at the Memorial Hospital while performing a major resection of a pelvic tumour. He was rushed to the nearby Doctors’ Hospital, but died the same night. A pioneering person. **BJHM**

*Conflict of interest: none.*

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