

## JACOB I. FABRIKANT - HISTORY

### IN MEMORIAM



### JACK – A RADIOSURGERY PIONEER

Jack Fabrikant was a radiosurgery pioneer. He was born on February 9, 1928 in Great Neck, New York. He received his B.Sc. in Chemistry from McGill University in Montreal in 1952, and his M.D. from McGill in 1956. After two years as a Surgical Intern and Resident at Duke, Jack went on

to Resident and Fellow positions in Radiology at Johns Hopkins. He received a Ph.D. in Biophysics from the University of London in 1964, following which he returned to Johns Hopkins, where he served as assistant and later Associate Professor of Radiology and Radiological Sciences. In 1970 he accepted the position of Professor and Chairman of the Department of Radiology at the University of Connecticut. In 1975 he accepted the position of Professor and Chairman of the Department of Radiology at McGill University. In 1978 he accepted the positions of Senior Scientist at the Donner Laboratory of Lawrence Berkeley Laboratory and Professor of Radiology at the University of California San Francisco and Berkeley, positions he held until his untimely death in 1993.

It is for his work at the Donner Laboratory that Jack is best known to the members of the International Stereotactic Radiosurgery Society. Using as a foundation the pituitary gland radiosurgery program pioneered at Berkeley in 1954 in 1980 Jack developed and implemented a program for treating inoperable arteriovenous malformations of the brain using the Bragg peak of the helium-ion beam at the Berkeley cyclotron. This was a multi-institutional program, involving the University of California at Berkeley and San Francisco and Stanford University. Jack's leadership was instrumental in bringing about many scientific and technical advances in radiosurgery. Amongst these innovations was the introduction of CT-based treatment planning for radiosurgery and MRI

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correlation for target delineation. His dose volume AVM obliteration data from the 1980s still serve as useful guidelines for today's treatments, especially for large AVMs. Jack was forthright regarding observations of complications of radiosurgery, having published early on about possible adverse effects and their relationship to dose and volume.

Perhaps less well known to the members of the ISRS is that Jack had extensive scientific and professional interests outside the field of radiosurgery. He was particularly interested in the effects of radiation on populations, and he served on numerous national and international scientific advisory committees.

These included the position of Chairman of the Public Health

and Safety Task Force for the President's Commission on the Accident at Three Mile Island. He also served on the National Academy of Sciences - National Research Council Committees on the Biological Effects of Ionizing Radiations (BEIR I-V), chairing the BEIR-IV report on the lung cancer risk from radon gas.

In recognition of his prominence in these matters he was invited by the Russian government to advise them on health effects and to suggest clean-up efforts after the accident at the Chernobyl nuclear reactor.

Jack published more than 350 papers, reports and book chapters in his prodigious career, and he served on many scientific, educational and editorial panels. Nonetheless, he always made

time for his patients, and for his students, many of whom have active positions in the radiological sciences, and for the many professional visitors from around the world who came to Berkeley in the early era of radiosurgery to see and to learn from him. We remember him as a warm, refined and gentle man, with an even temper and a quick sense of humor. Jack would have been both humbled and honored to know that the International Stereotactic Radiosurgery Society makes an award in his name. The Fabrikant award is awarded every two years to an individual or individuals who have made longstanding and significant contributions to the fields of radiosurgery.