



BRACHYTHERAPY

In memory of Monique Pernot M.D. (1928-2021)



On 13 December last year, Dr Monique Pernot died at the age of 93 years. The French, European and worldwide brachytherapy community thus mourns a personality that has shaped our field for many decades.

Dr Pernot completed her pre-medical studies in the Vosges Mountains in eastern France, near the homeland of Jeanne d'Arc. She then moved to the University of Nancy, one of the oldest in France, for her medical education. She received her residency training in radiation oncology between 1953 and 1958 in the Regional Cancer Institute, which was created in 1924 as a radium centre. She started her medical activity with radium needles for interstitial or endocavitary treatments, and she specialised in brachytherapy, which was also called Curietherapie at that time.

In 1959, she achieved the status of assistant in radiation oncology. She was using radium sources to treat gynaecological, head and neck and periorificial tumours. Soon she turned to the use of modern radioisotopes at the Paris School of Brachytherapy, which was developed by Bernard Pierquin and Daniel Chassagne. While in Paris, she learned new techniques made possible by the miniaturisation of sources of iridium, and the rules of the Paris system, which were developed by Andrée Dutreix. She also discovered the benefit of using plastic moulds for gynaecological implants.

Dr Pernot was invited by Professor Pierquin to join the Groupe Européen de Curiethérapie (GEC) in 1972 at Geneva. Deeply interested in interstitial brachytherapy techniques, she explored the new possibilities that were offered by iridium sources. She developed new techniques of implantation to improve local control for head and neck tumours, especially for velo-tonsillar tumours, as well as the loop procedure that reduced the risk of posterior relapses for buccal mucosa primaries. She also demonstrated the very high local control rate that could be obtained through use of brachytherapy alone for tongue and floor-of-mouth tumours; this control rate was competitive to that obtained through use of cobalt external beam irradiation. She analysed the clinical and radiobiological factors that influenced local control and late complications for head and neck tumours in a series of more than 1200 patients, who were followed-up over 10 years.

For gynaecological treatments, she also developed new approaches that included the "umbrella technique" for endo-uterine carcinomas. Once again, she instigated long follow-up periods that enabled her to analyse the prognostic factors for more than 1000 gynaecological tumour patients. Dr Pernot also participated in several multi-institutional studies that were performed by the GEC group. She became secretary of this group and welcomed its members to Nancy on multiple occasions. A few years after GEC merged with the European Society for Radiotherapy and Oncology (ESTRO), she organised the GEC-ESTRO annual meeting in Nancy in 1993, and welcomed 250 attendees.

Dr Pernot published more than 30 international scientific papers as first author, several book chapters and more than 100 abstracts. She welcomed and taught residents and postgraduates in Nancy from all countries around the world, some of whom are now leading brachytherapists in their home countries.

Dr Pernot was a full-time brachytherapist for four decades in Nancy, where she became head of the department. In 1993, she retired from clinical practice, but continued to analyse and publish her data, and to participate in teaching sessions worldwide. She received the French medals of Chevalier de l'Ordre National du Mérite in 1998, Chevalier de la Légion d'Honneur in 2009, and the Medal of the Société Française de Radiothérapie Oncologique in 2001. Last but not least, she received in 2008 the Marie Curie Gold Medal during the World Congress of Brachytherapy meeting in Boston, which is the most prestigious award presented by GEC-ESTRO/American Brachytherapy Society/ Latin-American Association of Oncological Radiation Therapy (ALATRO).

She continued to be active in patient care and was very involved with her grand-children and great-grand-children.

Dr Pernot was described by Professor Pierquin as the “Papesse (high priestess) of brachytherapy”. She worked with modesty and showed a high sense of humility; she was very close to her patients, but was honest and realistic when she considered the possibilities and limits of brachytherapy treatment. She opened new development perspectives for cancer treatment, in perfect harmony with other specialists. She created the Nancy School of Brachytherapy, and her name is associated with those of other brachytherapy “pioneers”.

Dr Pernot will always be remembered in a special way as a formative, dynamic personality, and above all as a role model who dedicated her professional life and showed a kindness of heart to cancer patients who were entrusted to her care. She will be deeply missed by all who are fortunate enough to have known her.



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Monique Pernot receiving the Marie Curie Gold Medal at the 2008 World Congress of Brachytherapy in Boston, USA



Left to right: 1: JM Cosset; 2: J Crook; 3: M Chelfi; 4: D Peiffert; 5: C Haie-Meider; 6: M Pernot; 7: B Erickson; 9: JM Hannoun-Levi; 10: Y Belkacemi; 11: C Charra-Brunaud; 12: J Bonnet; 13: M Delannes

