Klaas Breur, Rotterdam 14 April 1916 – Amstelveen 18 June 1981, is a Dutch physician who specialised in radiotherapy at the Rotterdams Radiotherapeutisch Instituut (RRTI) (Rotterdam Radiotherapy Institute) under Dr Daniel den Hoed. He was appointed university professor in radiotherapy in 1964, becoming the first professor in this discipline in The Netherlands. From 1964 to 1981, he was head of the radiotherapy department at the Netherlands Cancer Institute.

Klaas Breur is the son of Nicolaas Breur (building contractor) and Wilhelmina Holster. He married Lena (Keek) van Eijk on 5 August 1943 in Rotterdam.

In 1933, he started his medical education in Leiden with the intention to become a general practitioner. As the University in Leiden was closed down by the German occupation authority in 1942, it was not possible for him to receive his diploma even though his studies were complete. In 1943 he visited the RRTI out of curiosity and became fascinated by radiotherapy. After three months, Daniel den Hoed asked him to stay and become a radiotherapist. After the war, he was officially presented with his medical diploma. In 1947 he was registered as specialist radiologist. In 1948, he was appointed vice director of the RRTI.

Still in 1948, Breur was called up for military service. His army division was deployed to the Dutch East Indies to take part in "policing actions" against the army of the young Republic of Indonesia. In 1950, on the sudden death of Daniel den Hoed, Breur was called back to continue his work. He fulfilled the position of director together with Den Hoed's widow, the radiologist Sytske den Hoed-Sytsema.

Between 1950 and 1964, Breur made his mark on the RRTI. He continues to build on the basis of what Den Hoed had laid down, in which every decision of the radiologist had to be based on clinical research. From the beginning, Breur has emphasized the treatment of the patient based on teamwork and multidisciplinary discussion. This lead to the collaboration with the Rotterdam urologists. It was on his initiative that radium implants were used in the treatment of bladder tumours. Based on this, the RRTI became the leading centre for the treatment of bladder tumours. In 1964, he was offered the possibility of accentuating the importance of radiotherapy at the university level in a combined position in Amsterdam . He becomes head of the Departments of Radiotherapy of both the Netherlands Cancer Institute and the teaching hospital (Wilhelmina Gasthuis), and – as first physician in The Netherlands – professor in radiotherapy at the University of Amsterdam. Both departments grew strongly from the moment of his arrival.

His contribution to Radiotherapy can be characterized in three areas of attention.

- Improving clinical practice, by multidisciplinary collaboration in research, reporting and decision-making. Introducing treatment protocols, and collaboration with external specialists in task groups and consultancy arrangements.
- Innovation of radiotherapy methods and techniques, by retrospective evaluation and by fundamental and experimental radiobiological research. His thesis "Patterns of growth and radiosensitivity of tumours in humans" (1965, Leiden) is a good example of his approach.

• Development of the profession and the position of the oncological radiotherapist within the medical society. Setting up national and international structures for collaboration. He was involved in the radiotherapy section of the Nederlandse Vereniging voor Radiologie (Dutch Society of Radiology) and from 1978 to his death he held the first chair of the Netherlandse Vereniging voor Radiotherapy (Dutch Society of Radiotherapy). In the international field he devoted himself to expanding the Organisation Europeénne de la Recherche du Cancer (OERTC) (European Organisation for Cancer Research) and in 1980 he took part in founding the European Society for Therapeutic Radiology and Oncology (ESTRO) and was for a short time the first president of ESTRO until his early death.

Over the course of the years, Breur was involved three times in the design of the premises of a radiotherapy department. Breur was proud to be the son of a building contractor. He had the gift of designing a logical and efficient division of space, – creating optimal conditions for working in a radiotherapy department. New buildings where his influence is visible, were opened in 1965 in the new Daniel den Hoed clinic in the south of Rotterdam, in 1973 in the new Netherlands Cancer Institute in the west of Amsterdam and in 1983 in the Academisch Medisch Centrum (Academic Medical Centre) in the south east of Amsterdam.

Professor Breur had an important influence on the growth of radiotherapy in both The Netherlands and abroad. Much was still expected of him. To honour him, the European Society for Radiotherapy and Oncology (ESTRO) instituted a medal in his name. This prize, awarded annually, the Klaas Breur Gold Medal, is the highest honour of the ESTRO and is awarded for exceptionally important contributions to radiotherapy in Europe. Dutch winners include G.W. Barendsen (1986), A. van der Kogel (1994), H. Bartelink (1997), B. Mijnheer (1998) and M. van Herk (2004).

*Information is mainly obtained from the following sources:

- *"Radiotherapie in Nederland, een historical perspectief" (Radiotherapy in The Netherlands, a historical perspective"), by Dr. H.C. Stam, 1993 (Dutch)*
- "In memoriam prof. dr. K. Breur" door J.A. Bangert, J.M.V. Burgers, D. Gonzalez Gonzalez ea., Ned. Tijdschrift voor geneeskunde 125, nr34, 1981, pp 1395-1396. (Dutch)
- <u>http://www.estro.org/about/awards/award-lectures-breur-award</u>