

OBITUARY



Professor Anton Hagenbeek 1948–2021: Father of MRD and lymphoma expert

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Whom the Gods love die young

-Lord Byron

Professor Anton Hagenbeek was born in 1948 in Den Haag, the Netherlands (Fig. 1). He received his MD degree from Erasmus University, Rotterdam in 1972. During his medical studies, he became involved in research via a scholarship to the Radiobiological Institute TNO in Rijswijk where he worked under the supervision of Professor Dirk W. van Bekkum. Professor van Bekkum, the Institute Director, was an early pioneer of haematopoietic cell transplantation [1]. The laboratory attracted scientists from everywhere and Ton (only his mother called him Anton) flourished in this vibrant, intellectually challenging environment. After completing his PhD: "Extracorporeal irradiation of the blood in a rat leukaemia model", he began a fellowship in internal medicine and haematology at Erasmus Medical Center. In 1981, he received a Fulbright award and spend a year at UCLA learning clinical aspects of transplants. Returning to the Netherlands, he joined the haematology group with Professor Bob Löwenberg and colleagues at the Rotterdam Daniel den Hoed Cancer Center. Ton and Bob had both worked in the van Bekkum laboratory and were both visiting fellows at UCLA with RPG. In 1993, Professor Hagenbeek was awarded a Chair in Experimental and Clinical Hematology (1993).

Throughout his career, Ton continued his laboratory research programme. Beginning in 1983 and continuing to 1990, Ton and Bob Löwenberg organized a series of symposia on what they called *minimal* residual disease (MRD) in acute myeloid and acute lymphoblastic leukaemias (Fig. 2). In 2020, at the prompting of Professor John Goldman and RPG, Ton gave his blessing to a name change to *measurable* residual disease [2]. In 1987 and the following years, Professor Hagenbeek along with his colleagues Anton Martens (there seems a surfeit on Antons) and van Bekkum published several articles including some in the earliest volumes of *Leukemia* on the use of MRD testing in a rat model of acute

myelocytic leukaemia pointing out today several limitations we face such as non-uniform distribution of leukaemia cells [3].

At the Rotterdam Cancer Center, for 15 years Ton focused on haemopoietic cell transplants in lymphomas. He contributed greatly to the growth and development of the Department's haematology/oncology programme. Even more importantly, during these years Ton met his second wife Annemiek Mellink who was a radiation oncologist and with whom he would spend a happy marriage.

In 1997, Ton was appointed chairman of the Department of Haematology at Utrecht University. In 2005, he joined the Haematology Department of Amsterdam University Medical Centers where he collaborated closely with MJK and MvO with a focus on lymphoma. He was fundamental to initiating pivotal multi-centre clinical trials in lymphomas within the HOVON cooperative group network and beyond. Ton's laboratory research continued his focus on acute leukaemias, including studies of MRD, allotransplants and cancer cell contamination of autotransplant grafts. Not one to sit still, Professor Hagenbeek's interest shifted to innovative lymphoma therapies, notably antibodies and antibody-drug conjugates. Ton was co-principal investigator on a multi-centre European Organization for Research and Treatment of cancer study of rituximab in advanced follicular lymphomas, now the standard-of-care therapy. He was also pivotal in the first international studies of ofatumumab ⁹⁰Y-ibritumomab tiuxetan and of brentuximab vedotin in Hodgkin disease. Professor Hagenbeek published on cost-effectiveness of different therapy strategies and on fair pricing and access to expensive drugs. His patients' well-being was foremost to him developing an e-health programme to help people with cancer cope with fatigue. In the European Hematology Association (EHA), Ton had many roles. He loved to teach and was instrumental in establishing a EHA Clinical Research Training in Hematology Programme.

Ton was an extraordinarily decent person with a sly sense of humour and a contagious joie de vivre. And he was brave. When he was diagnosed with a level-4 melanoma just before his marriage, he postponed it until it was certain he was cured. The death of his love Annemiek in 2019 was a severe blow but he laboured on buoyed by his sons. Ton is survived by his sons Bart, Thijs, Joris and Friso and his grandson Jacob and in the hearts and minds of his family, colleagues, patients and friends.

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Fig. 1 Professor Anton Hagenbeek.

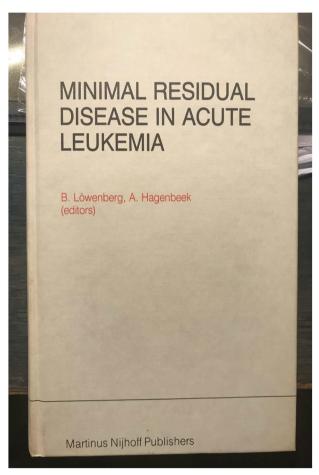


Fig. 2 First MRD Conference.

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COMPETING INTERESTS

RPG is a consultant to BeiGene Ltd., Fusion Pharma LLC, LaJolla NanoMedical Inc., Mingsight Parmaceuticals Inc. and CStone Pharmaceuticals; advisor to Antegene Biotech LLC, Medical Director, FFF Enterprises Inc.; partner, AZAC Inc.; Board of Directors, Russian Foundation for Cancer Research Support; and Scientific Advisory Board: StemRad Ltd. MJK reported honoraria and travel support from Amgen, Bristol-Myers Squibb, Celgene, Janssen, Kite/Gilead, Merck, Miltenyi Biotec, Novartis and Roche and reports research support from Celgene, Roche, and Takeda. BL and MvO have no conflicts to declare.

ADDITIONAL INFORMATION

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