

Obituary

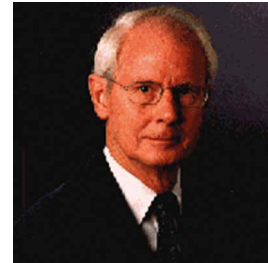
Hans Henrik Holm

16.9.1931–24.7.2016

The founder of the Danish Society of Diagnostic Ultrasound (DUDS), our mentor and great friend Hans Henrik Holm (HHH) has passed away at the age of 84. He had, even after progressive Parkinsonism, an enviable zest for life, and he never lost his most distinctive feature: a warm and welcoming person with a fantastic sense of humour. HHH's importance to both Danish and international ultrasound imaging simply cannot be overstated. Even his nicknames "The father of interventional ultrasound" and "The father of Danish ultrasound" speaks for the greatness of his achievements.

HHH graduated from Copenhagen University in 1958. As a resident in the department of urology at Gentofte Hospital in the beginning of the 60's his visions for the novel imaging modality, ultrasound, were recognized by the head of the urology department prof. Gammelgaard. HHH established a laboratory of ultrasound with a dedicated group of other young residents at the hospital. No B-mode scanners were commercially available at that time, why HHH had to build one. The Danish Welding Institute had experience with ultrasound (for non-destructive testing of materials), and with help from their engineer, Allan Northeved, HHH and the group around him constructed a static B-mode scanner in 1967. HHH did the first ultrasound-guided intervention – puncture of a renal cyst. The procedure was filmed and presented at the AIUM meeting in USA in 1970. Other achievements were a transurethral ultrasound scanner in 1973 and presentation of the real-time ultrasound guided puncture technique using a linear array transducer in 1974. In February 1974, the Danish Society of Diagnostic Ultrasound was formed and founded at a meeting at Gentofte Hospital and HHH was elected as its first president. In 1975 The Ultrasound Laboratory

was moved to facilities in the newly built Herlev Hospital, the flagship of Danish hospitals at that time. A great era began for Hans Henrik and his team of various younger "ultrasound doctors" who started to work on different minimal invasive treatment methods. In 1983, Holm introduced the trans rectal ultrasound (TRUS) guided implantation technique for the treatment of prostatic cancer (brachytherapy). Several procedures, equipment and applications of interventional ultrasound were born there in collaboration with industrial partners, among others, the Danish company Brüel & Kjær. Countless articles and lectures came from the Ultrasound Department at Herlev, published or presented around the world. Ultrasound guided ablation techniques, using laser, microwaves, radiofrequency, cryo and radioactive seeds were developed or clinically implemented because HHH had created an unsurpassed environment for research and innovation. There was a constant flow of doctors visiting the Ultrasound Department from Denmark, Scandinavia and the rest of the world. Some came for a day, others stayed up to one year. All returned to their homelands stimulated and enriched by HHH, and several of them returned and founded ultrasound units in their hospitals after the concept they had experienced. Numerous international contacts were established by HHH and doctors spread over several generations of ultrasound experts can thank him for his contribution to their careers. HHH had an incredible drive and commitment and combined with his winning character he was in charge of many international congresses. The culmination was without a doubt the ultrasound World Congress WFUMB 1991 when Hans Henrik was president of one of the most successful congresses in the world federation's history



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with 2100 participating from around the world. At Herlev Hospital nine international congresses On Interventional Ultrasound with HHH as the primary congress president were conducted from 1983–2000. A cherished element of these congresses was "live video procedures", where real time cases such as ultrasound guided nephrostomy, ablation of liver metastases or transrectal biopsies were broadcasted live to the auditorium.

HHH became honorary member of several international scientific societies and received numerous awards for his work including The Novo Award and The August Krogh Prize. He also received the great honour to be appointed adjunct professor at Copenhagen University and honorary professor at the world's oldest university, the University of Bologna. The latter occurred after his retirement, and it was a great experience for him and Kirsten to receive this honour at a ceremony in the heart of the old university.

After his retirement HHH continued his genuine interest in the development of Danish ultrasound and for many years, he was a welcome participant at the annual scientific meeting in DUDS.

Our thoughts are with his wife Kirsten and their three children Jacob, Niels and Trine with families. We know they will miss him dearly. We will too.

On behalf of the Danish Society of Diagnostic Ultrasound board

Bjørn Skjoldby, Chairman