

During the last three decades, Sten Rasmussen has played the main role in supporting the increased number of patient treatments on the reduced number of beds. Based on the evolution of day-case surgery within the arthroscopic management of joint diseases, the implementation of accelerated stay programs in general orthopedic surgery, and the implementation of minimally invasive surgery and robotic surgery.

The research is on knee osteoarthritis, pain, sports injuries, spine surgery, and arthroscopic surgery. The main scientific approach is the randomized controlled trial. The main scientific method is the clinical randomized double-blind controlled investor-initiated trials with Sten Rasmussen as the PI or the senior investigator. In addition, Sten Rasmussen has great insight into a broad spectrum of relevant scientific approaches including proteomics, big data, and machine learning. The majority of publications are on knee disorders.

The research in knee joint osteoarthritis, inflammation, and pain has led to more than 40 publications within the last 10 years, one in NEJM (NEJM 2015 Oct 22; 373: 1597-606).

Sten Rasmussen has supervised more than 20 Ph.D. students to completion, 12 as the main supervisor, and 2 were appointed Professors in 2019. Currently the main supervisor for 1 Ph.D. student and co-supervisor in 1 Ph.D. study, both in robotic surgery.

Sten Rasmussen was one of the founders of the medicine candidate program at Aalborg University. A spiral curriculum was developed, focusing on problem-based learning, and clinical decision-making in the clinical setting. A 30 ECTS research semester was included, classifying the candidate program as academic.

Recently as head of the Department of Clinical Medicine at Health, Aalborg University, Sten Rasmussen has merged several research centers to create a mission within Aalborg University Mission, "A Mission Oriented University" and Health's mission "Digital health". The research center, Danish Center for Health Care Research, Clinical Data Science, Research Unit for General Practice, and Health Economy, the mission is "Dynamic Prediction of Outcome", and the actual case is atrial fibrillation. AI, machine learning, deep learning, neural network, omics, and multi-omics are some of the major research ingredients.

#### Bibliography:

Peer-reviewed papers 152, 25 as first author, 51 as senior author  
Abstracts 200

The following table visualizes the bibliometric analysis performed by June 26, 2024:

Database / Number of publications / Citations / H-Index

Google Scholar / 172 / 8818 / 48

Web of Science / 143 / 4310 / 35

Scopus / 148 / 4809 / 34

Links / ID's to updated bibliometric analysis in each database:

Google Scholar: <http://scholar.google.dk/citations?user=pQUczwkAAAAJ>

Web of Science: <http://www.researcherid.com/rid/N-3916-2013>

Scopus: <http://www.scopus.com/authid/detail.url?authorId=35275822700>

ORCID: <http://orcid.org/0000-0002-8664-352X>

Aalborg University: <http://personprofil.aau.dk/120351>

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