KARIN ANDERSSON was born 1989 in Enköping, Sweden. After receiving her Master of Science degree in Medical Physics at Stockholm University in 2012, she started working in the Department of Medical Physics at Örebro University Hospital. She has been combining clinical work as a Medical Physicist, mainly in the field of radiotherapy, with research.

Computed tomography (CT) has the ability to provide high-quality images of cross-sectional anatomy and is today an essential tool in a wide range of medical practices. However, CT images are generally more prone to errors, i.e. artifacts, compared to conventional radiography. Artifacts caused by the presence of metallic objects in the patient is a common problem in CT imaging, which can limit the diagnostic value of the examination and also introduce inaccuracies in radiotherapy treatment planning process. The aim of this thesis was to study the impact of metal artifacts on CT image quality and radiotherapy treatment planning, and to evaluate different metal artifact reduction methods.