

Contents:

Chapter I General Introduction

9 Cone Beam Computed Tomography 3D imaging in Oral and Maxillofacial Surgery

Chapter II Applications of CBCT in orthodontics

35 Accuracy of CBCT measurements on 3D surface models for cephalometric analysis

47 Influence of scanning and reconstruction parameters on quality of CBCT 3D models of
the dental arches

61 Accuracy assessment of three-dimensional surface reconstructions of teeth from Cone
Beam Computed Tomography scans

Chapter III Applications of CBCT in endodontics

73 Value of CBCT in detecting vertical root fractures in endodontically filled teeth

82 Comparison of five CBCT systems for detecting vertical root fractures in endodontically
treated teeth

93 Value of CBCT in determining the outcome of root canal treatment

105 **Chapter IV General Discussion**

113 **Chapter V Summary and conclusions**

Samenvatting en conclusies

Publications of promovendus

Acknowledgement