

Preface

No exposure to x rays can be considered completely free of risk, so the use of radiation by dentists and their assistants implies a responsibility to ensure appropriate protection. This Report provides radiation protection guidance for the use of x rays in dental practice, including the use of cone-beam computed tomography, digital-imaging devices, and handheld x-ray systems.

The aim of this Report is to provide a practical radiation protection guide for dentists and their assistants. Information is presented in a clear and comprehensive format focusing on dental radiological practices.

This Report is dedicated to the memory of S. Julian Gibbs, DDS, PhD, former Professor of Radiology and Radiological Sciences at Vanderbilt University. Dr. Gibbs was the Co-Chair of Scientific Committee 91, that was responsible for the National Council on Radiation Protection and Measurements (NCRP) Report No. 145, *Radiation Protection in Dentistry*, and served as a member of the Council for many years. His research interests focused on radiation exposures from medical and dental radiologic procedures, and he was a pioneer in applying computational techniques to studies of radiation dose distribution to critical organs. Dr. Gibbs was a true scholar and humanitarian and was an inspiration and beloved mentor to dentists who pursued careers in the radiation sciences.



This Report supersedes NCRP Report No. 145, *Radiation Protection in Dentistry*, which was issued in December 2003. This Report was prepared by Scientific Committee 4-5 on Radiation Protection in Dentistry. Serving on Scientific Committee 4-5 were:

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The Council wishes to express its appreciation to the Committee members for the time and effort devoted to the preparation of this

Report, and to the following organizations for providing financial support during its preparation:

American Academy of Oral and Maxillofacial Radiology

American Association of Physicists in Medicine

American Board of Radiology Foundation

American Dental Education Association

Centers for Disease Control and Prevention

(Grant No. 5UE1EH000989)

U.S. Food and Drug Administration, Center for Devices and
Radiological Health (Grant No. HHSF223201301080P)

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