**ABSTRACT**

Mammography dosimetry is performed for several reasons: (a) to evaluate the risk to the patient, an important consideration in benefit-risk analysis of screening of asymptomatic women; (b) to compare the risks of competing imaging techniques; (c) to assess the performance of mammographic equipment during acceptance and quality control testing; (d) to answer questions concerning dose from patients and staff; and (e) to comply with requirements and guidelines from regulatory and accrediting agencies. Several dose and exposure parameters will be reviewed with emphasis being placed on the mean glandular dose as the best estimator of patient risk. The many factors which can affect dose will be discussed and methods to obtain optimum images with minimum dose will be presented. Finally, results of nationwide surveys of mammography dose will be reviewed.