

The justification for mammographic examinations is the potential benefit they provide in detecting breast cancer at an early stage and reducing mortality. This benefit must be balanced against the associated potential risk of radiation carcinogenesis, and economic costs. This presentation reviews the current literature regarding the benefits of cancer detection and the risk of radiation carcinogenesis. Current data are used to calculate the expected individual benefits and radiation risks associated with annual mammographic screening. It appears that there is little risk of breast cancer associated with radiation exposure from annual mammography in women over age 35. Current data indicate that for a woman beginning annual mammographic screening at age 50 and continuing until age 75, the benefit exceeds the radiation risk by a factor of almost 100. Even for a woman who begins annual screening at age 35 and continues until age 75, the benefit of reduced mortality is calculated to exceed the radiation risk by a factor of more than 25.

The educational objectives of this presentation are to

- 1) discuss the benefits of mammographic screening
- 2) discuss the radiation risks associated with mammographic screening