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Total Body Skin Exams: Sensitivity, Specificity, and Number Needed to Screen

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Total Body Skin Exams: Sensitivity, Specificity, and Number Needed to Screen

Introduction: Skin cancer, the most common form of cancer worldwide, has one of the highest cure rates among cancers if diagnosed and treated early in its course. The Total Body Skin Exam (TBSE) is the primary modality used to screen for skin cancers. Currently, few studies have characterized the effectiveness of the TBSE in contemporary populations.

Objective: Characterizing the number-needed-to-screen (NNS) to diagnose a case of skin cancer through TBSEs will make it possible to better understand its effectiveness as a screening modality and its utility in an increasingly population health-based healthcare system.

Methods: A retrospective chart review of 3155 patients who received a TBSE at Jefferson Dermatology Associates from January 1st, 2017 to December 31st, 2018 was carried out, using RedCap for database entry and SPSS for statistical analysis.

Results: The mean NNS with TBSE to diagnose a case of skin cancer is 18. There is a strong and significant correlation between NNS and age (Pearson correlation of .724, \( p = .042 \)), with NNS ranging from 66 in the 4th decade of life to 5 in the 10th decade of life.

Conclusion: The NNS for the TBSE in contemporary patients supports its role and efficacy as the primary screening modality for skin cancer in an age-dependent manner. Further investigation into the cost-effectiveness of TBSEs and the NNS to prevent one skin cancer-related death is highly warranted.