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**Incidence of Basal Cell and Squamous Cell Skin Cancers:
The Marshfield Epidemiologic Study Area (MESA)**

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Background: The occurrence of non-melanoma skin cancer (NMSC) in the general population is not well quantified. Further, common disease coding systems do not distinguish between basal cell carcinoma (BCC) and squamous cell carcinoma (SCC). The Marshfield Epidemiologic Study Area (MESA) is an established resource for population-based research. Nearly all inpatient and outpatient health events in the region are captured by a single medical care system. The 77,000 residents are fairly representative of United States (US) whites. Our goal was to estimate the incidence and nationwide burden of NMSC, with separate estimates for BCC and SCC.

Methods: Incident cases of NMSC from 1992 to 2001 were identified through archived International Classification of Diseases, 9th Revision (ICD-9) codes 173-173.9. Cases from 2000 to 2001 were further classified into BCC and SCC through an extensive lexicon system used for all recent medical charting. Rate calculations employed MESA person-time denominators. The 2000 US standard population was used for direct age-adjustment. Validation efforts included sample medical chart review and estimation of melanoma incidence for comparison with published rates.

Results: With 2287 incident cases of NMSC, the overall age-adjusted incidence rate was 282/100,000 person-years (py) (95% confidence interval, 270-293). Incidence increased strongly with age and was about 40% higher for men than women, particularly after age 60. BCC, 189/100,000py (169-209), was more common than SCC, 53/100,000py (43-64). The specificity of NMSC diagnosis codes was high (>90%). The melanoma rate estimate for MESA (23.6/100,000py) was similar to the published rate for whites in the US (23.9/100,000).

Conclusions: Projecting from these data, there may be about 660,000 US whites with incident NMSC each year, including 500,000 with BCC. The total burden of NMSC including recurrent lesions would be even larger and can be expected to grow as the population ages. Systematic methods for continued monitoring of this condition should be considered.