**Materials and Methods**

*Study design*

This was a descriptive, prospective, observational, cross-sectional prevalence study of skin phototypes to determine if ethnicity, hair color, and eye color significantly predict Fitzpatrick scale phototype in an Ecuadorian population. We followed the STROBE guidelines for the report of this work.

*Setting*

The study was conducted from May 2017 to January 2018 in 7 rural towns in Quito, Ecuador. The staff was a mix between registered nurses, medical doctors, and medical students.

*Study Sample Size*

Assuming a prevalence of 0.65 of skin premalignant and malignant lesions, approximately 254 residents would have been needed to measure this proportion with a desired width of a 95% confidence interval (95% CI); precision was fixed at 6% with possible losses of 5%.

*Participants*

The inclusion criteria were (1) being a Spanish-speaking resident of the Ruta Escondida de la Mitad del Mundo, (2) aged ≥40 years, and (3) written informed consent given personally or by legal representative. Only residents able to give informed consent by themselves or having a legal representative who decided on behalf of the resident took part in this study. The exclusion criteria were a previous diagnosis of infectious skin diseases and/or already diagnosed melanocytic or nonmelanocytic lesions. All residents living in the Ruta Escondida de la Mitad del Mundo at the time of data collection were invited to participate.

*Bias Control*

Subjects were randomly selected. All study-related procedures and measurements were conducted by trained medical doctors including a dermatologist and study assistants who received a formal training in the use of the scales. All assessments and measurements were done using previously validated tools.

*Variables and Instruments*

Data regarding demographic variables like gender, age, education, and tobacco and alcohol consumption were collected. Data regarding sun exposure and use of makeup were also gathered.

The Fitzpatrick scale was applied to categorize a person's skin according to their eye color, hair color, propensity to tan, and tolerance to sunlight; this scale allows classification of individuals into six different skin types, ranging from very fair (skin type I) to very dark (skin type VI), depending upon whether the patient burns or tans at the first average sun exposure. The SCINEXA scale was applied to determine skin damage.Five cutaneous signs were evaluated: uneven pigmentation, fine wrinkles, lax appearance, reduced fat tissue, and seborrheic keratosis (intrinsic SCINEXA score), and 18 signs of extrinsic aging: sunburn, freckles, actinic lentigo, hyperpigmentation and/or melasma, change in phototype, yellowness, pseudoscars, coarse wrinkles, solar elastosis, cutis rhomboidalis, elastosis, comedones and cysts of Favre-Racouchot, xerosis, telangectasias, permanent erythema, actinic keratosis, basal cell carcinoma, squamous cell carcinoma, and malignant melanoma (extrinsic SCINEXA score). Each item was scored as 0 (none), 1 (mild), 2 (moderate), or 3 (severe). For some items (uneven pigmentation, cutis rhomboidalis nuchae, elastosis, comedones and cysts of Favre-Racouchot, and malignant skin tumors, a binary scale was used: yes or no. The maximum possible score was 54.

*Statistical Analysis*

All statistical analyses were performed using the statistical package SPSS Statistics for Windows, Version 24.0 (released 2013; IBM Corporation, Armonk, NY, USA).

Absolute and relative frequencies were calculated by group of age, gender, education, smoking history, alcohol consumption, and occupation. The number of persons and percentages were also calculated for habits of exposure to sun and prevention according to gender. The prevalence of skin phototypes was reported in percentage proportions. The association between groups of these categorical variables was analyzed with the χ2 test. A *p* value <0.05 was considered statistically significant.

Univariate analysis was employed to identify significant single predictor variables of Fitzpatrick phototype. The predictor variables assessed included age, gender, ethnicity, eye color, and hair color. Ordered logistic regression analysis was applied to identify variables that were significant predictors of Fitzpatrick phototype. Odds ratios and 95% CI were calculated.

Pearson’s correlation coefficient was used to measure the strength of a linear association between the SCINEXA scale (skin damage) and the scores of the Fitzpatrick scale.