psychosis, seizures requiring therapy for 6 months, cerebrovascular accident ever, cranial or peripheral neuropathy, transverse myelitis). We excluded from the analysis patients with neurologic involvement at entry or those who were lost to follow up before 6 months have elapsed from baseline or who had died during that time period. Data were recorded in an ARTHROS database.
Statistical analysis: Patients who developed and those who did not develop NP-damage were compared using the log-rank test. Independent predictors of NP-damage accrual were identified using a Cox proportional hazard regression model.
Results During a median follow-up time of 47 months, 79 (7.2%) patients developed NP-damage. In the univariable analyses, variables predictive of NP-damage were: cardiovascular disease (4.16 per 100 patient-year of follow up [% pyf] vs. 1.62% pyf in patients without cardiovascular disease, $p < 0.001$), renal disease (2.92% pyf vs. 1.73% pyf, $p = 0.038$) and lymphopenia (2.71% pyf vs. 1.90% pyf, $p = 0.012$). In the multivariable analysis only cardiovascular disease (Yes vs. No) was retained in the model: HR 2.554 (95% CI: 1.580–4.128). During follow-up, mortality was higher in those who developed as compared to those who did not develop NP-damage (12/79, 15.2% vs. 34/1021, 3.3%; $p < 0.0001$).
Conclusions Cardiovascular disease was predictive of the occurrence of NP-damage. Furthermore, the occurrence of NP-damage was significantly associated with a higher mortality. A better control in the early stages of neurological manifestations (early diagnosis and treatment) is needed to reduce NP-damage and improve survival.
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CE-46 INFLUENCE OF SOLAR RADIATION IN CUTANEOUS MANIFESTATIONS OF LUPUS: DATA FROM THE GLADEL COHORT

[1]**Marina Scolnik***, [1]Luis J Catoggio, [1]Enrique R Soriano, [2]Daniel Wojdyla, [3]Alejandro Alvarellos, [4]Nilzio A Da Silva, [5]Eduardo Borba, [6]Emilia I Sato, [7]Antonio Iglesias, [8]Marlene Guibert-Toledano, [9]Sergio Jacobelli, [10]Ignacio García De La Torre, [11]María J Sauza, [12]Eduardo M Acevedo-Vásquez, [13]María H Esteva-Spinetti, [14]Graciela S Alarcón, [15]Bernardo A Pons-Estel. *[1]Sección de Reumatología, Servicio de Clínica Médica; Hospital Italiano and Fundación Dr Pedro M. Catoggio para el Progreso de la Reumatología, Buenos Aires, Argentina; [2]GLADEL consultant, Rosario, Argentina; [3]Hospital Privado, Centro Médico de Córdoba, Córdoba, Argentina; [4]Faculdade de Medicina da Universidade Federal de Goiás, Goiania, Brazil; [5]Hospital das Clínicas da Faculdade de Medicina da Universidade de Sao Paulo, Sao Paulo, Brazil; [6]Disciplina de Reumatología, Escola Paulista de Medicina, Universidade Federal da Sao Paulo -UNIFESP, Sao Paulo), Brazil; [7]Universidad del Bosque, Bogota, Colombia; [8]Centro de Investigaciones Médico Quirúrgicas-CIMEQ, Havana, Cuba; [9]Escuela de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile; [10]Hospital General de Occidente de la Secretaría de Salud, Guadalajara, Jalisco, Mexico; [11]Instituto Mexicano de Seguro Social, Hospital de Especialidades N_25, Monterrey, Nuevo León, Mexico; [12]Hospital Nacional ''Guillermo Almenara Irigoyen,'' Essalud, Lima, Peru; [13]Hospital Central de San Cristóbal, San Cristóbal, Venezuela; [14]Department of Medicine, Division of Clinical Immunology and Rheumatology, School of Medicine, The University of Alabama at Birmingham, Birmingham, Alabama, USA; [15]Hospital Provincial de Rosario, Rosario, Argentina*

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Background Whether ultraviolet radiation (UV) exposure is a risk factor for the occurrence of Systemic Lupus Erythematosus (SLE) or of flares remains unclear. Classically, it has been thought that sun exposure is a risk factor for developing cutaneous manifestations. On the other hand, in experimental studies UV radiation has a number of immunomodulatory effects and stimulates vitamin D synthesis. Our objective was to examine the mucocutaneous manifestations of SLE patients from the GLADEL cohort in relation to latitude and solar radiation of the place where they lived along Central and South America by performing an ecological study.
Materials and methods GLADEL patients were categorised according to latitude and solar radiation (insolation on horizontal surface) of the Rheumatology Centre where they were recruited, ascertained between the period of cohort follow up (1995–2004); this was obtained using NASA Surface meteorology and Solar Energy estimator (https://eosweb.larc.nasa.gov/cgi-bin/sse/interann.cgi?email=skip@larc.nasa.gov). Alopecia, photosensitivity, malar rash, discoid lesions, oral ulcers and subacute cutaneous lupus at cohort entry and during follow up were examined in multivariate models in relation to the average daily solar radiation of the city of residence (as a continuous variable) and other possible confounders.
Results The GLADEL cohort included 1480 lupus patients, with a disease duration < 2 years at entry, 89.9 % female (CI: 88–91), mean age at diagnosis 29.5 (SD 12.3), median follow up 52 months (IQR 24–70), from 34 centres of 22 cities of 9 countries in Latin America. Latitudes of these centres varied between −38° S (Mar del Plata, Argentina) and 25.7° N (Monterrey, Mexico) and mean daily solar radiation varied between 4.44 Kwh/m^2/day (Porto Alegre, Brazil) and 6.08 Kwh/m^2/day (Recife, Brazil). When entering the cohort, 1191 patients (80.47%) had one or more of the cutaneous manifestations mentioned above and 434 patients (29.31%) developed new skin involvement during follow up.

In logistic regression analysis after adjusting for age, gender, ethnic group, urban residence, latitude, antimalarial use and autoantibodies, living in a city with higher daily solar radiation (examined at 1 Kwh/m^2/day increments) was not associated to any of the cutaneous manifestations at disease onset or during follow up (Table 1).

Abstract CE-46 Table 1 Associations of average daily solar radiation of city of residence by multivariable logistic regression analysis*

Clinical manifestation	OR (manifestation before/at cohort inclusion)	OR (new manifestation)	OR (manifestation during follow up)
Alopecia*	0.79 (0.61–1.02)	1.35 (0.92–1.98)	1.08 (0.83–1.42)
Oral/nasal ulcers*	0.81 (0.62–1.04)	1.05 (0.66–1.69)	0.74 (0.53–1.03)
Photosensitivity*	0.79 (0.62–1.03)	0.63 (0.39–1.04)	0.81 (0.60–1.09)
Subacute cutaneous lupus*	1.21 (0.57–2.54)	0.81 (0.31–2.13)	0.7 (0.30–1.62)
Malar rash*	0.92 (0.71–1.18)	1.41 (0.91–2.16)	1.17 (0.89–1.52)
Discoid lesions*	1.24 (0.82–1.88)	1.83 (0.81–4.11)	1.29 (0.77–2.18)
Any of the previous*	0.88 (0.64–1.23)	1.32 (1.00–1.75)	1.23 (0.95–1.59)

*Outcome: Daily solar radiation increment of 1 Kwh/m^2/day. All regressions adjusted for age at onset, gender, ethnic group, urban residence, latitude, antimalarial use and autoantibodies (anti DNA, anti Sm, anti Ro, antiphospholipid, low C3).

Conclusions In the GLADEL cohort, the average solar radiation of the city of residence was not associated with an increased risk of developing cutaneous manifestations.
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