



**Azienda Policlinico Vittorio Emanuele
Catania**

Clinica Oculistica

Direttore: Prof. T. Avitabile

GEOEPIDEMIOLOGIA DELLA DEGENERAZIONE MACULARE LEGATA ALL'ETA'

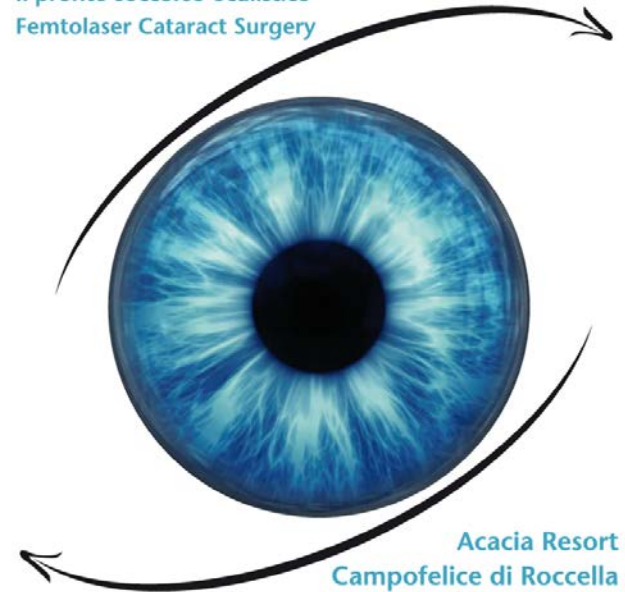
Cantavenera Angela



XLI Congresso

Le linee guida in oftalmologia

Il pronto soccorso oculistico
Femtolaser Cataract Surgery



Acacia Resort
Campofelice di Roccella
14•15•16 Aprile 2016

Segreteria organizzativa:

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www.kalosconvegni.it

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FAD "IL GLAUCOMA" (Parte seconda)
di L. Buratto - L. Caretti
20 crediti ECM

Epidemiologia

- Prima causa di cecità legale nei paesi industrializzati
- Rara prima dei 65 anni
- 13% della popolazione sopra gli 85 anni
- 288 milioni di affetti previsti per il 2040

Importante sfida medica e socioeconomica a livello mondiale



Scopo dello studio

...esiste un gradiente geografico?

- **Valutare un eventuale correlazione tra localizzazione geografica e prevalenza**
- **Individuare fattori demografici, geografici ed etnici che possono influenzare la prevalenza della DMLE**

Geo-Epidemiology of Age-Related Macular Degeneration: New Clues Into the Pathogenesis



MICHELE REIBALDI, ANTONIO LONGO, ALFREDO PULVIRENTI, TERESIO AVITABILE, ANDREA RUSSO,
SALVATORE CILLINO, CESARE MARIOTTI, AND ALESSANDRA CASUCCIO

Materiali e Metodi

2782 published studies, letters, abstracts and review articles on the prevalence of AMD were identified using PubMed, Medline, Embase and Web of Science up to May 2014

2818 were excluded after abstract review as prevalence of AMD was not measured

64 reports retrieved after abstract review for more detailed evaluation

34 excluded due to:
reports not written in English; reports numbers of eyes with AMD as opposed to number of individuals; not population based, but surveys or audits of hospital eye departments; not fundus photography; not standardized grading; sample not representative of the population; not provided distinct prevalence of early and late AMD; not allowed geographical representation of data

30 papers on population-based studies, reporting on 35 AMD prevalence data with geo-localization of the site of the study were included in the analysis

Materiali e Metodi

CRITERI DI INCLUSIONE :

- Prevalenza Early / Late AMD specificata
- Valutazione fotografica standardizzata delle lesioni
- Precisa localizzazione geografica

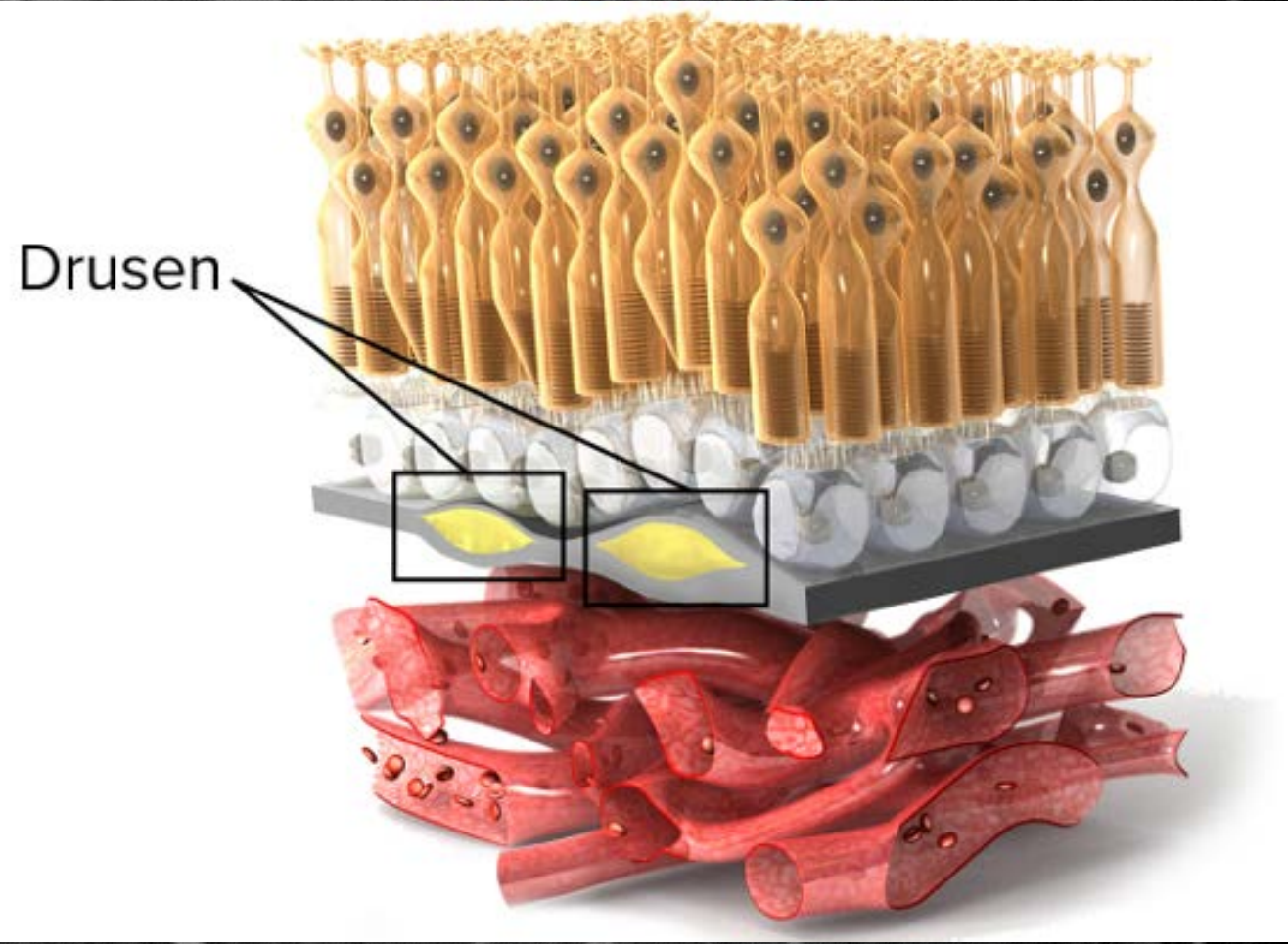


Calcolo della media annua delle radiazioni solari incidenti sulla superficie terrestre delle aree indicate negli studi

Classificazione clinica

EARLY

CA
CA
int
ab



LATE

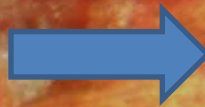
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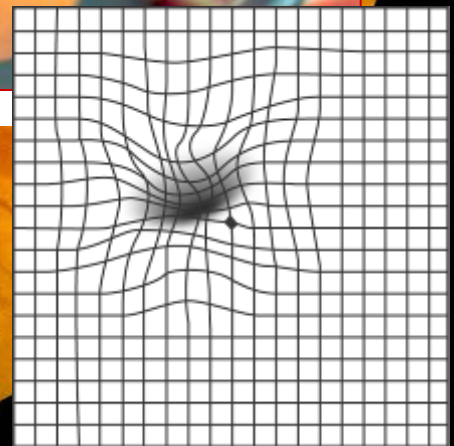
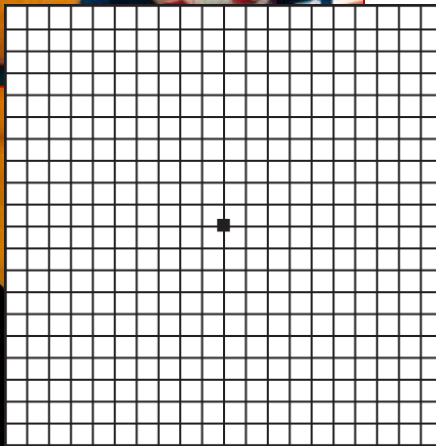
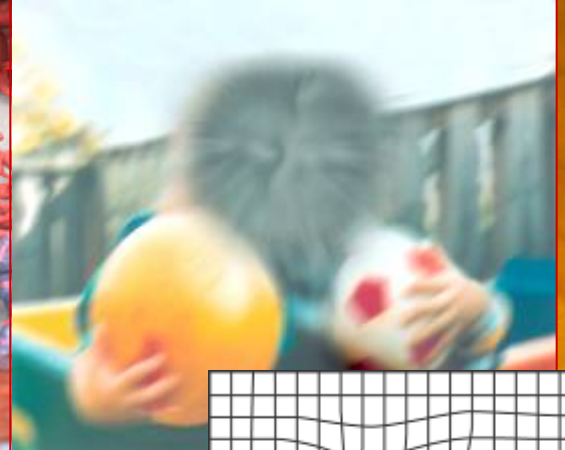
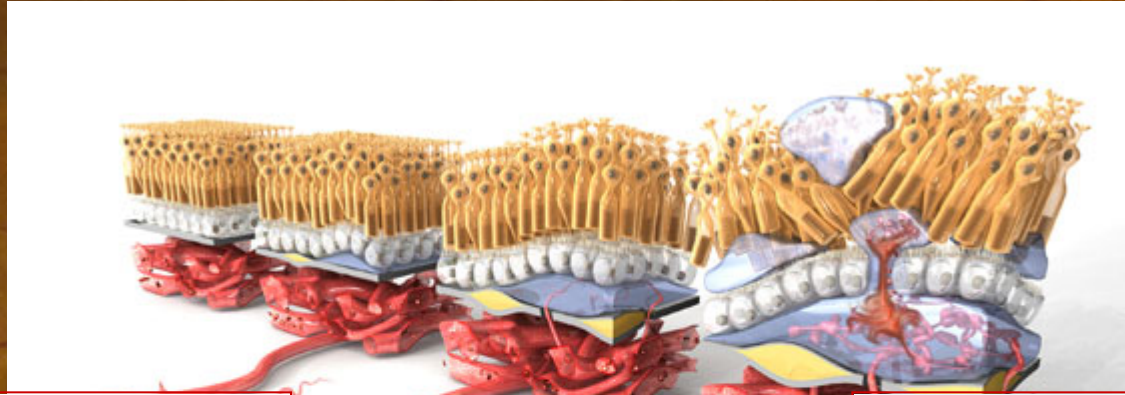
to be due to age-related macular degeneration.

Age-Related Eye Disease Study Research Group. A randomized, placebo-controlled, clinical trial of high-dose supplementation with vitamins C and E, beta carotene, and zinc for age-related macular degeneration and vision loss: AREDS report no 8. Arch Ophthalmol 2001;

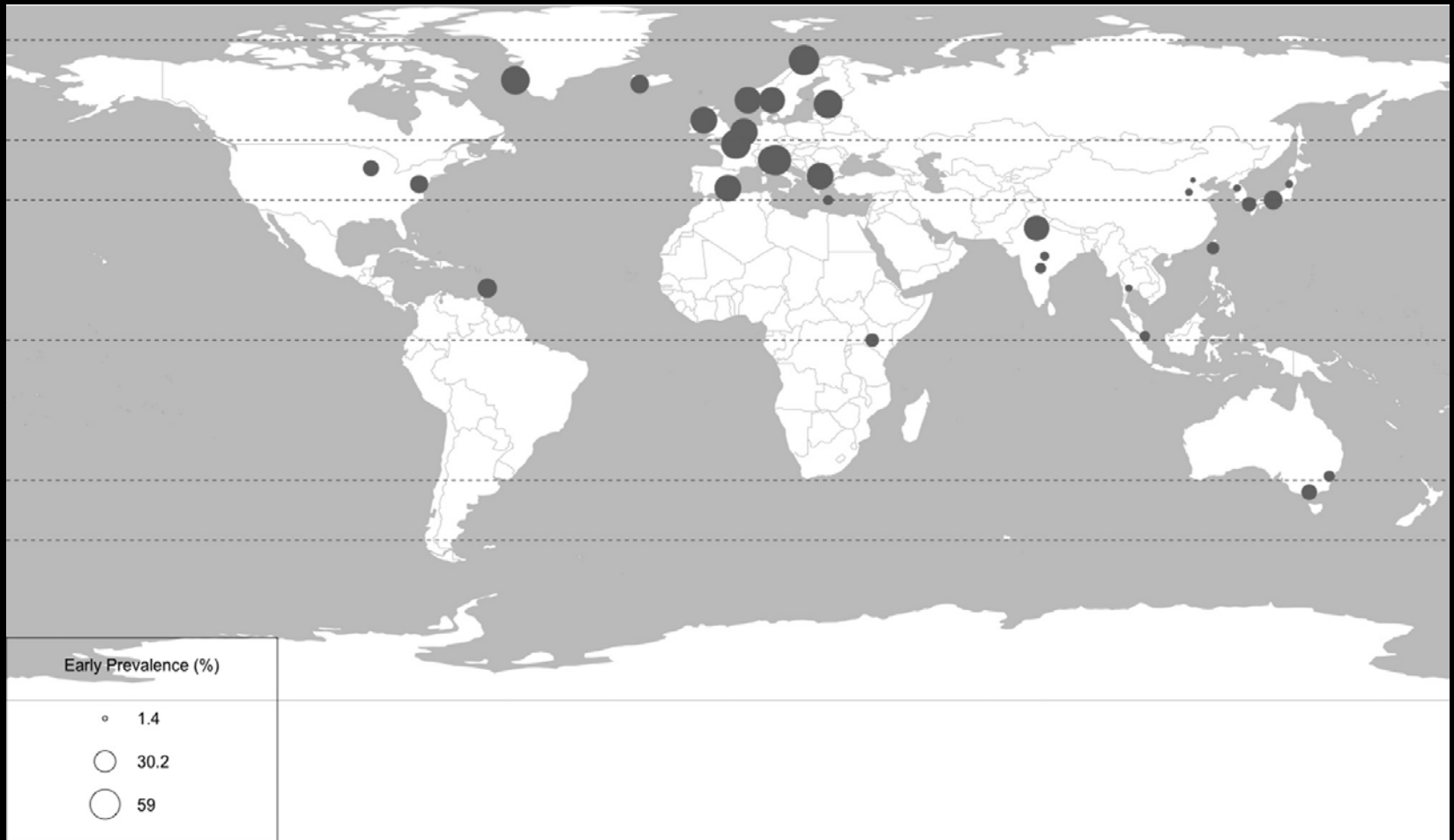
Dry AMD



Wet AMD

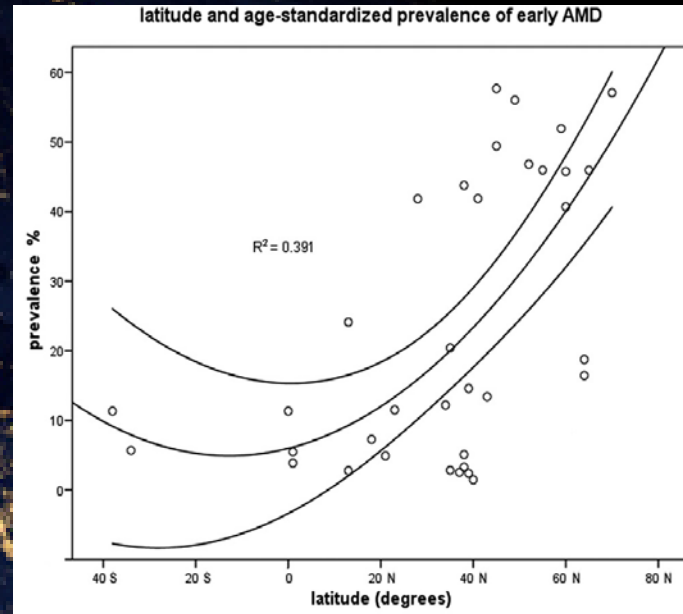


EARLY AMD

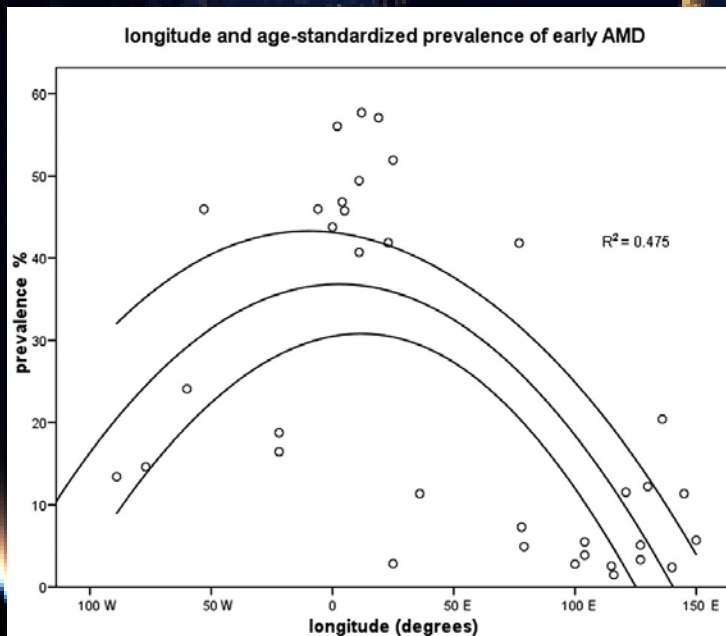


Risultati Early AMD

Early AMD / Latitudine



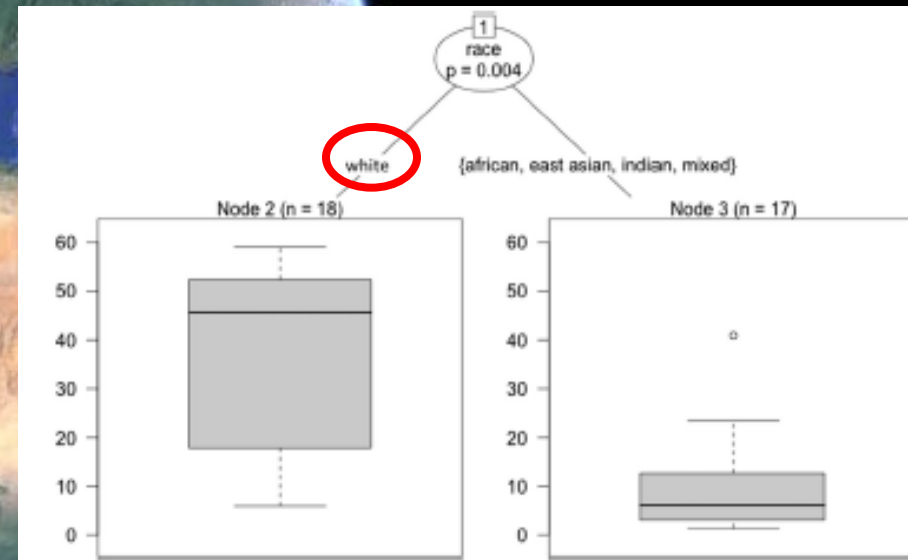
Early AMD / Longitudine



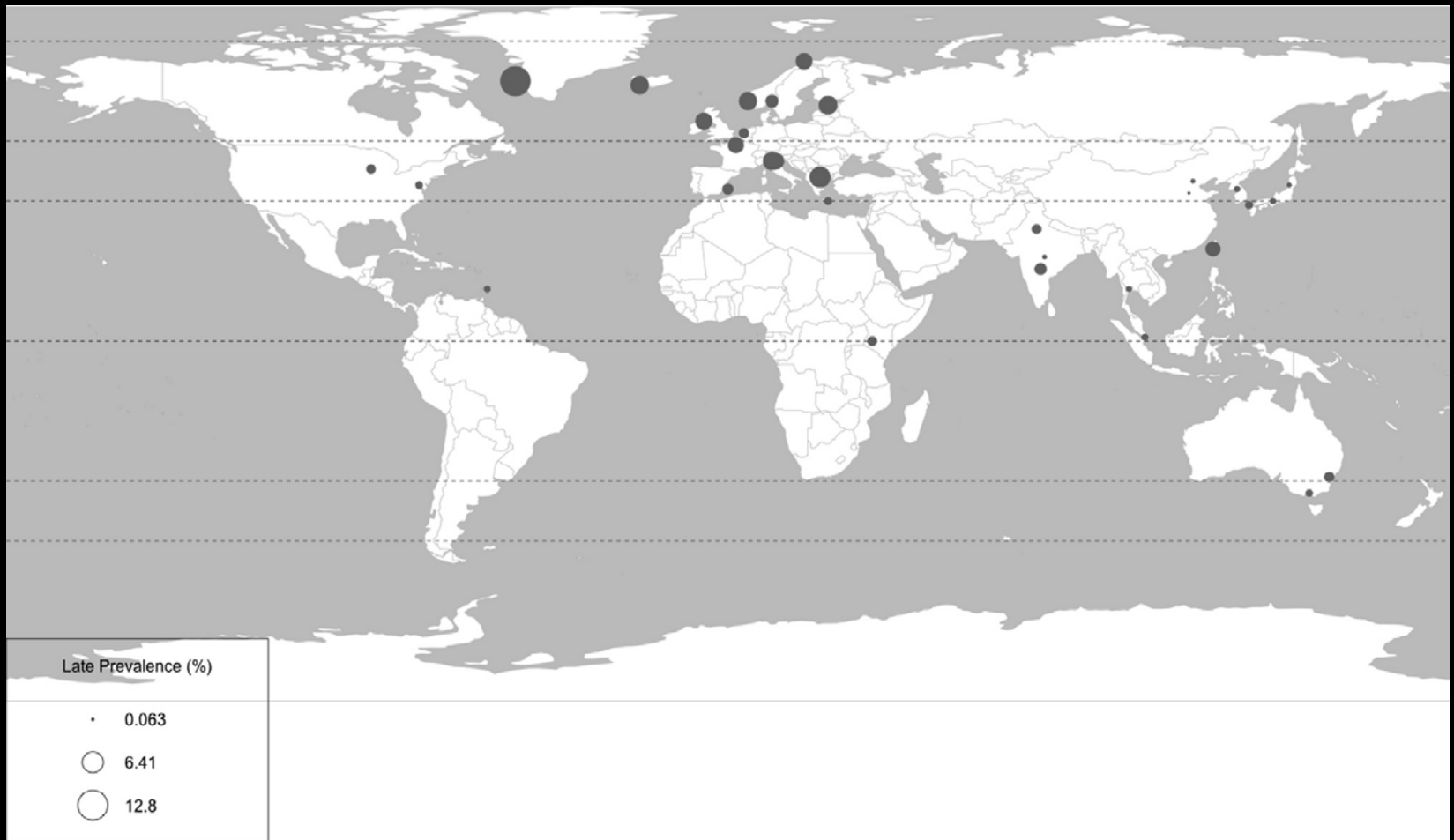
Risultati Early AMD

TABLE 2. Parametric Coefficients of the Model of Early Age-Related Macular Degeneration

	Estimate	Std Err	Z-value	P(> z)
Intercept	-1.53	0.014	-108.5	<2e-16
Approximate significance of smooth terms				
	edf	Rel.edf	χ^2	PValue
f_1 (age)	2.942	2.995	397.3	<2e-16 (P < .001)
f_2 (latitude)	2.728	2.924	572.0	<2e-16 (P < .001)
f_3 (longitude)	2.775	2.932	442.7	<2e-16 (P < .001)
f_4 (race)	2.640	2.875	470.4	<2e-16 (P < .001)
f_5 (insolation)	2.901	2.984	1034.0	<2e-16 (P < .001)

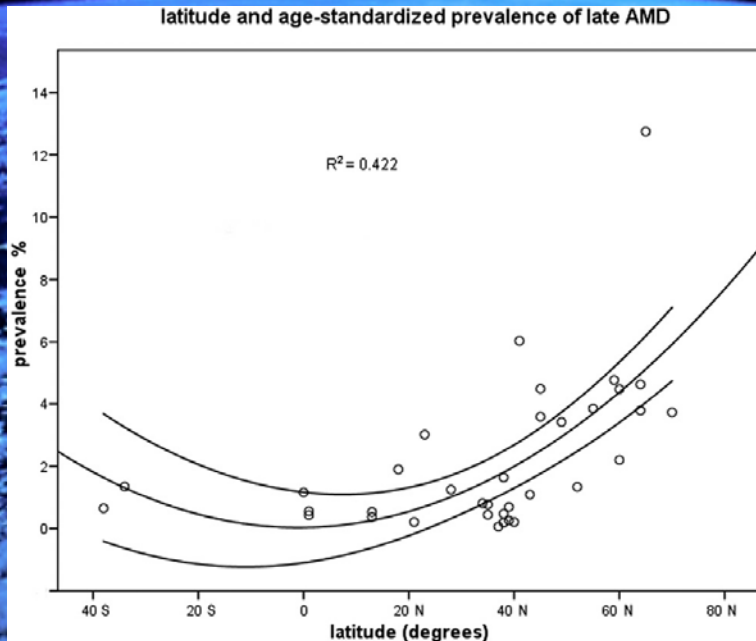


LATE AMD

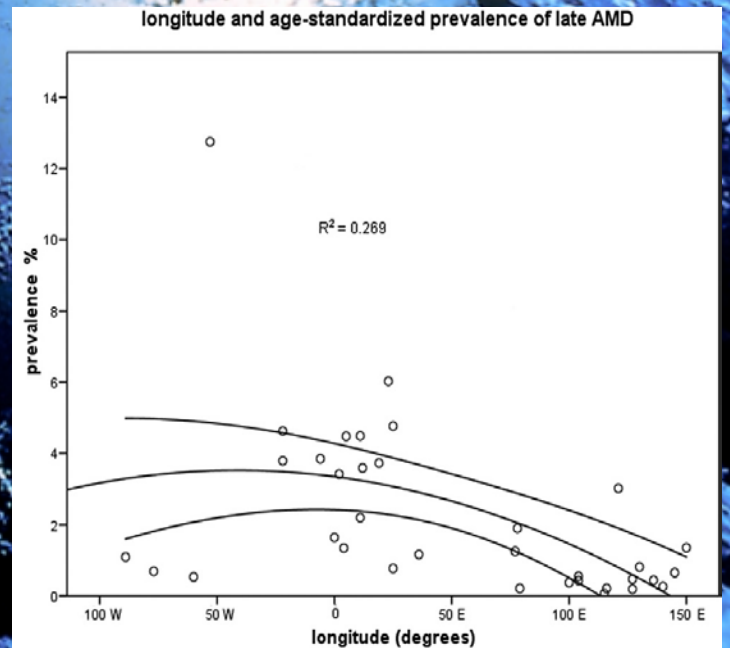


Risultati Late AMD

Late AMD / Latitudine



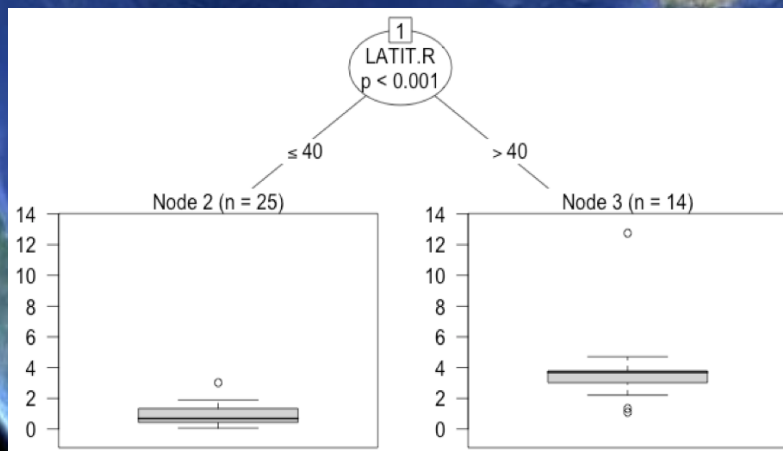
Late AMD / Longitudine



Risultati Late AMD

TABLE 3. Parametric Coefficients of the Model of Late Age-Related Macular Degeneration

	Estimate	Std Err	Z-value	P(> z)
Intercept	-4.44234	0.039	-114.9	<2e-16
Approximate significance of smooth terms				
	edf	Ref.df	χ^2	P Value
f_1 (age)	2.1907	3	91.06	<2e-16 ($P < .001$)
f_2 (latitude)	1.7021	3	31.92	1.14e-09 ($P < .001$)
f_3 (longitude)	0.9678	3	29.94	1.06e-10 ($P < .001$)
f_4 (race)	2.9123	3	91.18	<2e-16 ($P < .001$)
f_5 (insolation)	2.8630	3	17.48	6.97e-05 ($P < .001$)





...vitamina D e AMD



Limiti

- Dati non disponibili per molte aree geografiche
- Non si hanno dati differenziati per forma umida o secca
- Non vengono analizzati fattori come occupazione, pigmentazione della cute, stile di vita



Conclusioni

- un significativo gradiente geografico...per la prima volta!
- la geografia come fattore di rischio
- fattori genetici E fattori ambientali



Grazie!