Nutrizione e dermopatie infantili

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Pediatra

XVII Convegno Nazionale

Dermatologia per il Pediatra

19 - 20 Maggio 2017
Palazzo dei Congressi di Riccione

Esiste l’obesità in età pediatrica e questa influenza la normale fisiologia della cute

Pediatric Dermatology Vol. 29 No. 5 567–570, 2012

The Effect of Obesity on Skin Disease and Epidermal Permeability Barrier Status in Children

Massimiliano Nino, Adriana Franzese, et al : The Effect of Obesity on Skin Disease and Epidermal Permeability Barrier Status in Children. Pediatric Dermatology Vol. 29 No. 5 567–570, 2012

TABLE 1. *Dermatoses distribution in the two groups (n = 65)*

Dermatoses	85th–95th Percentile (*n* = 40) *n* (%)	>95th Percentile (*n* = 25) *n* (%)
Plantar hyperkeratosis	0	5 (20)
Acanthosis nigricans	0	3 (12)
Skin tags	1 (2.5)	10 (40)
Striae distensae	9 (22.5)	8 (32)
Intertrigo (candidal, dermatophytes, bacteria)	0	1 (4)
Hyperhidrosis	5 (12.5)	6 (24)
Keratosis pilaris	7 (17.5)	1 (4)
Hyperpigmentation (frictional)	0	0
Stasis pigmentation	0	0

Massimiliano Nino, Adriana Franzese, et al : The Effect of Obesity on Skin Disease and Epidermal Permeability Barrier Status in Children. Pediatric Dermatology Vol. 29 No. 5 567–570, 2012

L'obesità è sicuramente associata ad una serie di dermatosi

Table I. Skin disorders in obesity

Insulin resistance
Insulin resistance syndrome
Acanthosis nigricans
Acrochordons
Keratosis pilaris
Hyperandrogenism
Hirsutism
Mechanical
Plantar hyperkeratosis
Striae distensae
Cellulite
Adiposis dolorosa
Lymphedema
Chronic venous insufficiency
Infectious
Intertrigo
Candida
Dermatophytes
Folliculitis
Necrotizing cellulitis/fasciitis
Inflammatory
Hidradenitis suppurativa
Psoriasis
Metabolic
Tophaceous gout

Gil Yosipovitchet al. Obesity and the skin: Skin physiology and skin manifestations of obesity
J Am. Acad. Dermatology June 2007

Acanthosis nigricans

E’ la manifestazione dermatologica più comune nell’obesità.

Placche simmetriche, vellutate, iperpigmentate

Più comunemente osservati nelle ascelle, inguine, e parte posteriore del collo

Acanthosis nigricans

AN benigna

suddivisa in:
ereditaria benigna,
acquisita benigna
associata all'obesità
da farmaci
nevoide

7% popolazione,

66% negli obesi.

Hermanns–Le T, Hermanns JF, Piérard GE. Juvenile acanthosis nigricans and insulinresistance. Pediatr Dermatol 2002;

Acanthosis nigricans

E’ considerato un potenziale marcatore cutaneo della resistenza all'insulina ed è uno dei criteri proposti dalla American Diabetes Association per identificare i bambini a rischio di sviluppare diabete di tipo 2.

American Diabetes Association. *Diabetes Care. 2000;23:381-389.*
Copeland K, et al. *J Okla State Med Assoc. 2006;99:19-24.*

Acanthosis nigricans

Non ci sono opzioni terapeutiche tranne per :

- Perdita di peso
- Controllo resistenza all'insulina

Poiché questa condizione può essere esteticamente fastidiosa, può motivare alcuni a sviluppare sani modificazioni dietetiche e stile di vita, al fine di migliorare la aspetto della loro pelle

Brickman WJ, Huang J, Silverman BL, et al. Acanthosis nigricans identifies youth at risk for metabolic abnormalities. J Pediatr. 2010;156(1):87-92;

Striae distensae
(strie da distensione, “smagliature”)

Lesioni cutanee lineari di tipo atrofico che appaiono in sedi caratteristiche.

Incidenza a favore del sesso femminile e razza bianca

Una prima fase

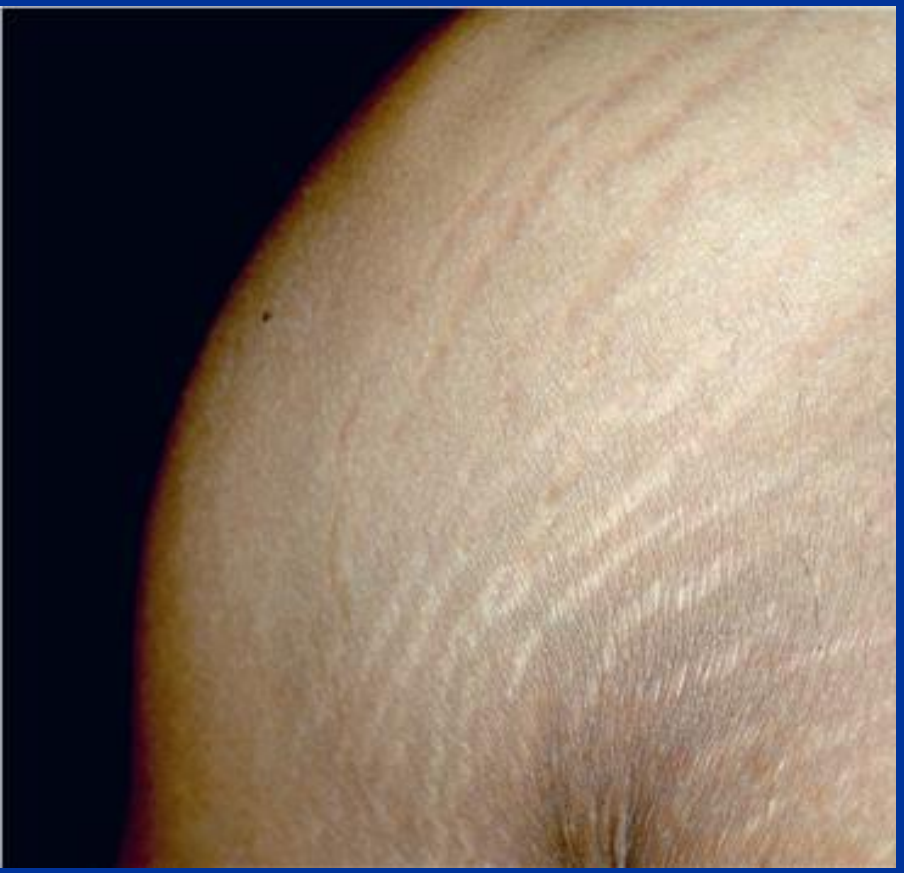
dura da mesi a 1-2 aa

Si estendono lentamente

Colorito che va dal rosa pallido al rosso violaceo, fino ad aspetti purpurici.

Superficie liscia

“Striae rubrae”

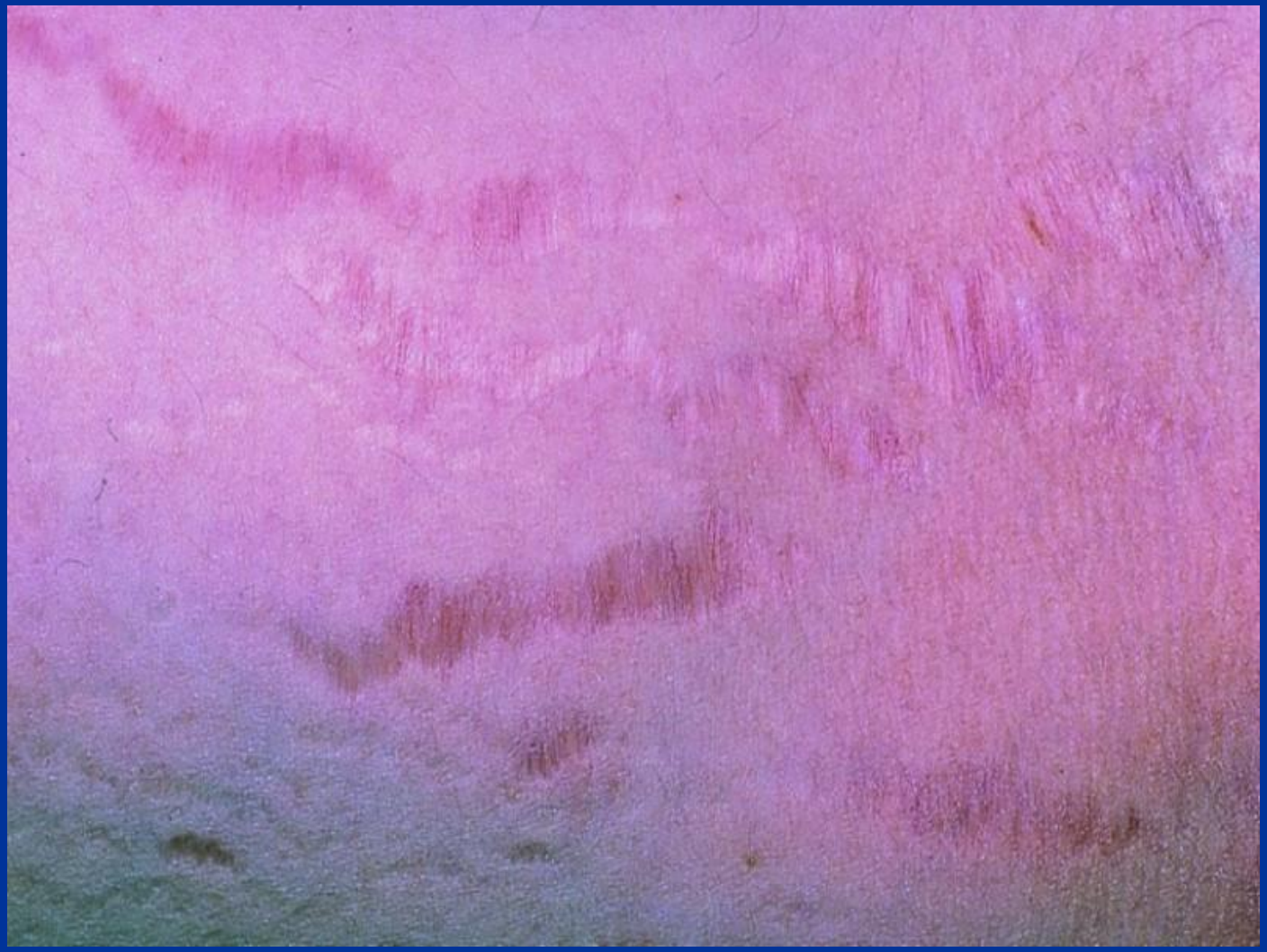


Una seconda fase

L’aspetto eritematoso lascia il posto ad un colorito biancastro, perlaceo

La superficie da liscia si fa depressa, cedevole al tatto.

“striae albae”



La larghezza varia da pochi mm. a 1-2 cm., mentre la loro lunghezza va da pochi cm. a 15-20 e oltre

Da : http://www.iacdworld.orga

Rappresentano una alterazione cutanea causata dall’azione di sollecitazioni meccaniche di tipo distensivo (stiramento) su cute con una ridotta capacità di resistenza a causa di fattori costituzionali e/o ormonali.

Da : http://www.huidziekten.nl

mammella, con disposizione a raggiera rispetto all’areola

Maschio

Iperandrogenismo

Iperandrogenismo

può essere il risultato di una incrementa produzione di androgeni endogeni dovuta ad :

- un incremento del volume del tessuto adiposo (con sintesi di testosterone)

- una iperinsulinemia (con incremento di produzione di androgeni ovarici)

Le manifestazioni cutanee includono

- irsutismo
- acne volgare

L'irsutismo : presenza, nella donna, di peli estesi in sedi tipiche del maschio

Irsutismo faciale è significativamente correlato con BMI indipendentemente dall'età e dal livello di testosterone

Ruutiainen K, Erkkola R, Gronroos MA, Irjala K. Influence of body mass index and age on the grade of hair growth in hirsute women of reproductive ages. Fertil Steril 1988

L'irsutismo : presenza, nella donna, di peli estesi in sedi tipiche del maschio

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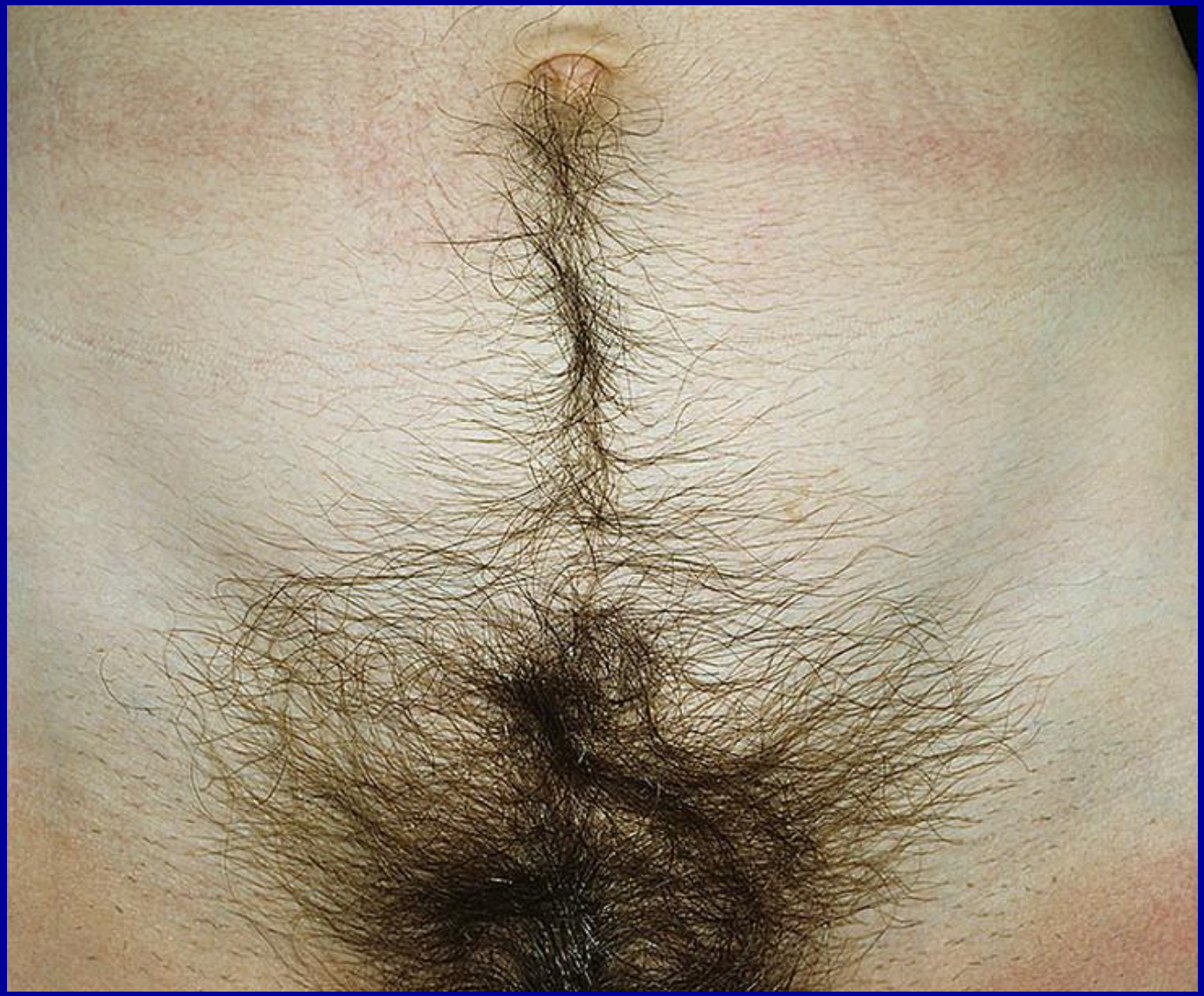
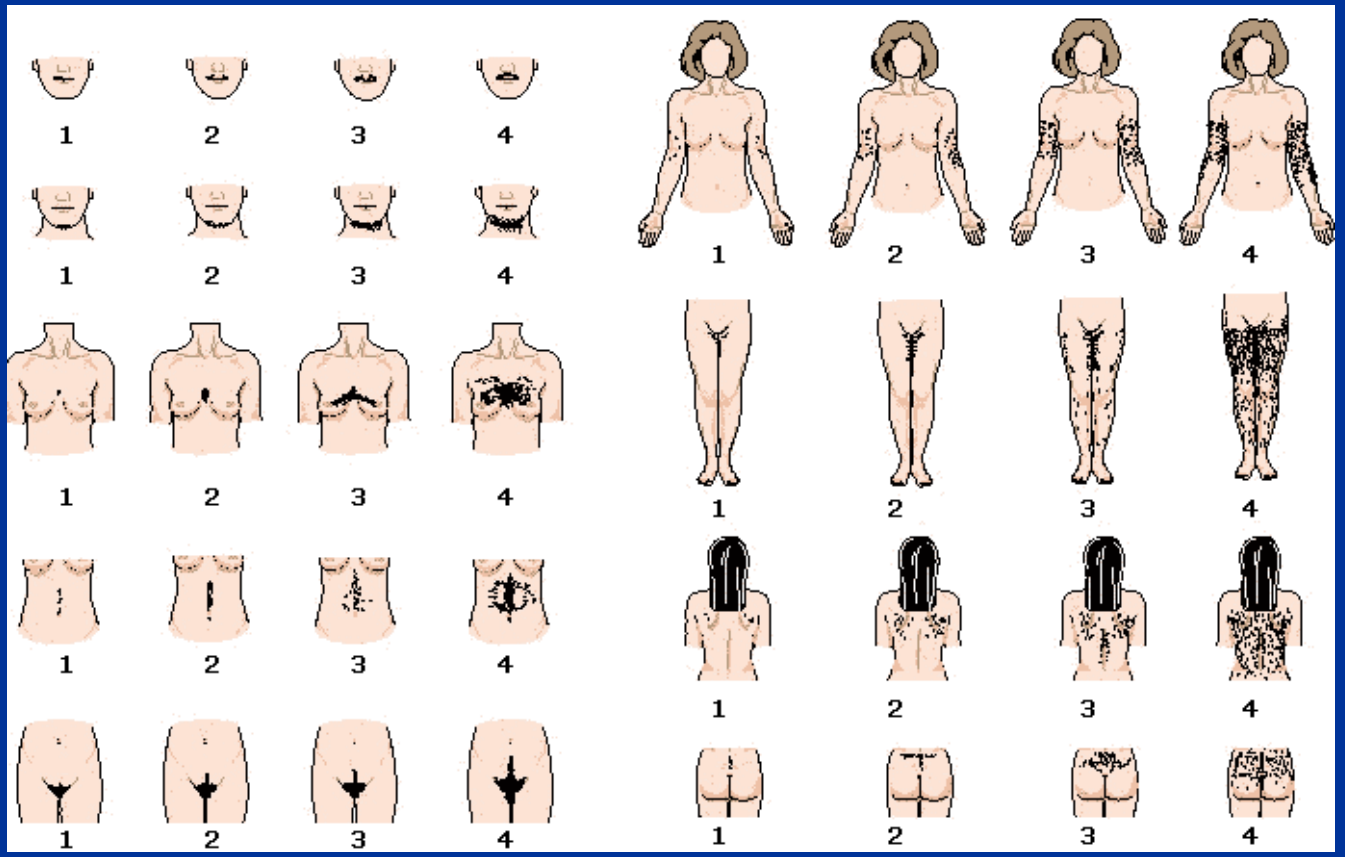


La valutazione dell'irsutismo



Scala di Ferriman e Gallwey

Assegna un punteggio da 0 (assenza) a 4 (disposizione pilifera francamente maschile) in 9 diverse zone corporee sensibili agli androgeni
valori ≥ 8 indicano la presenza di irsutismo

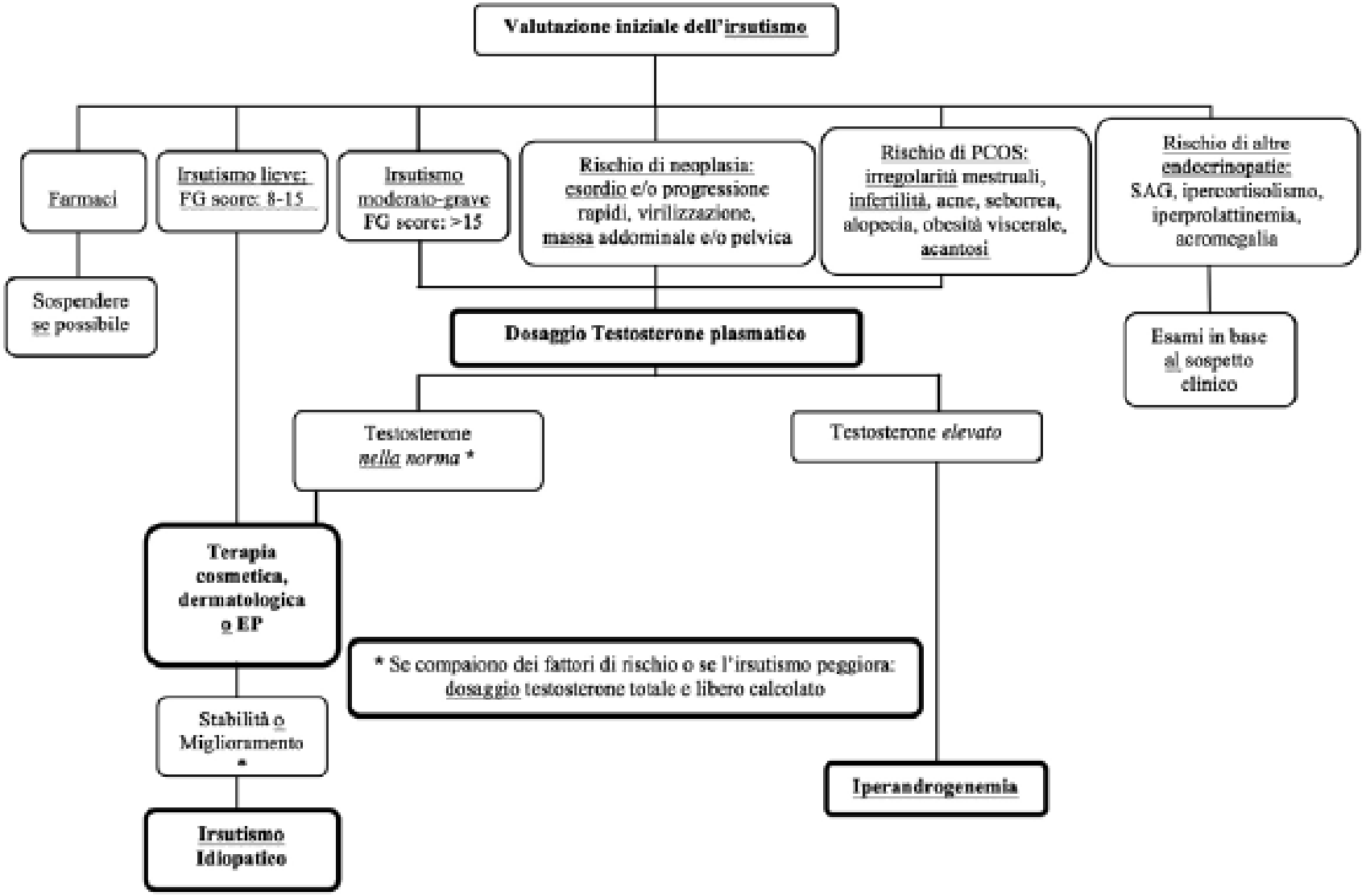


Figura 2: Flow-chart diagnostico-terapeutica per l'irsutismo
(modificata da Martin et al. Evaluation and treatment of hirsutism in premenopausal women: an Endocrine Society clinical practice guideline. J Clin Endocrinol Metab 2008, 93: 1105-20)

Acne e Obesità

Acne e Obesità

Eur J Dermatol 2006; 16 (3): 251-3

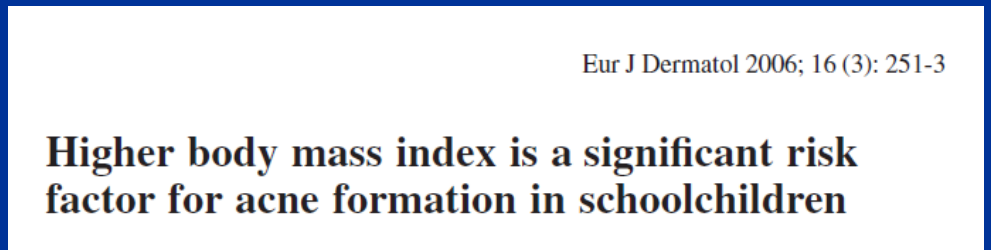
Higher body mass index is a significant risk factor for acne formation in schoolchildren

Acne e Obesità

totale di 3.274 ragazzi sono stati esaminati da due equipe di dermatologi.

Il BMI in studenti senza acne (18.2 ± 3.4) era significativamente più bassa rispetto ai soggetti acne (19.5 ± 3.7).

Studenti con un BMI <18,5 avevano un tasso di prevalenza di acne minore in particolare per le lesioni infiammatorie,
Studenti un BMI ≥ 95% avevano un tasso significativamente più alto di acne.



Eur J Dermatol 2006; 16 (3): 251-3

Higher body mass index is a significant risk factor for acne formation in schoolchildren

phase of it. Mr. R. J. Lunnon and Miss Milne took the photographs. To them and to all the physicians of St. John's Hospital for Diseases of the Skin who allowed us to investigate their patients we are most grateful.

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Goldman, L. (1933). Ibid., **28**, 688.
Kroepfli, von P., and Schuppli, R. (1955). *Dermatologica (Basel)*, **110**, 1.
Morgan, J. K. (1953). *Brit. J. Derm.*, **65**, 84.
Wells, G. C. (1956). Ibid. In press.

OBSERVATIONS ON ACNE, SEBORRHOEA, AND OBESITY

BY

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AND

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A survey of 2,720 unselected soldiers was made in order to clarify the natural history of acne and its correlation, if any, with seborrhoea, obesity, and colouring.

Acne and Seborrhoea.—Nearly every textbook of dermatology refers to the association between acne and seborrhoea and the need to treat coexistent dandruff, which is taken to be the hallmark of seborrhoeic dermatitis. According to Molesworth (1937), "a certain degree of seborrhoeic dermatitis, at least in the form of a scurfy scalp, is invariable and should be treated simultaneously." Becker and Obermayer (1947) say the same thing and give standard instructions to all patients: "Unless it is otherwise specified, shampoo twice weekly." "Milder degrees of dandruff are almost always present" (Mitchell-Heggs, 1950). Acne is "worse in those who have coarse oily skins and pityriasis of the scalp" (Andrews, 1954). We have found only one attempt (Cohen, 1945b) to verify this belief objectively, but, on the other hand, there has been some speculation on the mechanism of the supposed association. Some writers mention the frequency of acne around the hair margin in cases of dandruff and suggest an infective process. We have not been able to observe this, and the results obtained in our investigation of a large series strongly suggest that there is no relation between the occurrence of dandruff and acne.

Acne and Weight.—There is less unanimity concerning the value of diet in the treatment of acne, but most writers recommend the elimination of chocolate and many advise reduction of carbohydrates, fats, and fried foods. Andrews (1954) says that acne is aggravated by "excess of fats, sweets, starchy food in the diet or overeating." Sutton (1941), proposing acne as a "pustular lipoidosis," even suggests that acne is worse in summer, owing partly to "gross increase in oil intake on account of the popularity of ice-cream." Mitchell-Heggs (1950) advises correction of obesity; but MacKenna (1952), while recommending reduction of carbohydrate and fried food, counsels regular weighing to avoid undernourishment.

If such factors do play a part in the aetiology of acne, they would probably be reflected in some degree of obesity; and an association between acne and obesity might be taken to lend support to these or other theories concerning acne. Our investigation suggests that there may be such an association.

Acne, Dandruff, and Colouring.—The association between acne, dandruff, and colouring has received less notice—possibly because there are no obvious therapeutic implications. The general belief appears to be that acne and dandruff are commoner or more severe in dark people. Bloch (1931), in his important paper establishing the correlation between the onset of acne and puberty in 4,191 Swiss children, says "darker pigmented persons are more subject to acne," but he gives no figures. Hinrichsen and Ivy (1938) had 93 negroes in their series of 1,120 American high-school students, and state that acne was commoner in the negro children; severe acne was slightly commoner in negro boys than in white boys, but the girls were about equal. The figures they quote do not strongly support the conclusion. Ormsby and Montgomery (1954) state that comedones are "somewhat more frequent in coarse-skinned brunettes." On the other hand, Cunningham and Lunsford (1931), using the records of 12,530 entrants to the University of California, state that acne and "complexion" are not related; and Lynch (1939) found no connexion between hair colour or texture and acne in the records of 4,235 entrants to Minnesota University. In the present series there is no significant correlation between acne and colouring, but dandruff is commoner in ginger subjects.

Material

The series consists of 2,720 soldiers aged between 15 and 40 years, each of whom was seen once only at a routine medical examination. All men attending during the period of the investigation are included except for three with psoriasis. The degree of acne was noted in 2,629, and a further 91 men were examined only for the presence or absence of acne. 2,220 of the men were examined for dandruff and colouring. The age distribution is shown in Table I.

The men were examined stripped, in good daylight. Age, height, and weight were recorded and compared with standard tables (Sunderman and Boerner, 1949). Weights were then expressed as the deviation in pounds from normal for the age and height.

Acne.—We followed Bloch's classification for recording the severity of acne: nil = no comedones present; grade 1 = comedones only; grade 2 = comedones with a few papules and/or pustules; grade 3 = many comedones, papules, and pustules. Grades 1, 2, and 3 together constitute the "total acne" or "acne in the broadest sense" of other writers. Grades 2 and 3 make up "clinical acne" or "acne in the narrowest sense." The presence of acne on the face, chest, back, and nape of the neck was recorded separately.

Dandruff.—Nil = no scales *on the scalp*—occasional flakes in the hair were ignored; grade 1 = any scales on the scalp, often symptomless; grade 2 = gross dandruff all over the scalp; the patient would usually be aware of it.

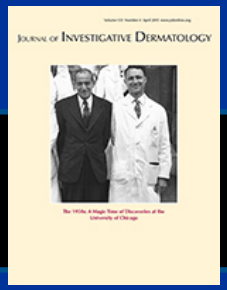
Colouring.—The range from blond hair to black was divided into groups. A separate group was formed of men with ginger hair. The distribution of the groups is shown in Table V.

Incidence of Acne

The incidence of acne in this series is shown in Table I. There were 49 men with grade 3 acne. These formed about 3% of each year from 18 to 22; apart from this period, there were three aged 17 and one aged 33 years. Our figures at 18 years are shown in Table II together with those of the comparable series of Bloch (1931), Hinrichsen and Ivy (1938), and Forbes (1946). These all deal with young men and use the same criteria of acne.

BOURNE S, JACOBS A **Observations on acne, seborrhoea, and obesity.**
Br Med J.1956 Jun 2;1(4978):1268-70.

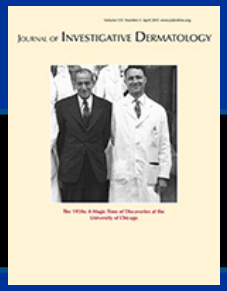
L'incidenza e la prevalenza a livello mondiale della psoriasi è poco conosciuta.



Rosa Parisi, Deborah P.M. Symmons, Christopher E.M. Griffiths, Darren M. Ashcroft
Global Epidemiology of Psoriasis: A Systematic Review of Incidence and Prevalence.
Journal of Investigative Dermatology (2013) 133, 377–385

Study	Country	Time	Diagnostic method	Age	People with Ps	Incidence rate per 100,000 person-years (95% CI)	Incidence rate per 100,000 person-years (95% CI) female	Incidence rate per 100,000 person-years (95% CI) male
Children								
Tollefson *et al.* (2010)	USA	1970–1999	N/D	<18	357	40.8 (36.6–45.1)[1,2]	43.9 (37.6–50.2)[1,2]	37.9 (32.2–43.6)[1,2]
		1970–1974				29.6 (20.9–38.3)		
		1975–1979				35.7 (25.9–45.5)		
		1980–1984				31.4 (22.0–40.8)		
		1985–1989				42.7 (31.8–53.7)		
		1990–1994				40.0 (29.7–50.3)		
		1995–1999				62.7 (50.4–65.0)		

Incidenza della psoriasi in età pediatrica.



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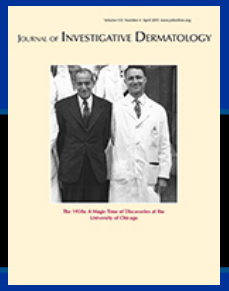
Incidenza della psoriasi in età pediatrica aumenta con l'età ed è aumentata negli ultimi anni

Tuttavia, potrebbe essere vero e proprio aumento,

oppure dovuto a :

- un concomitante aumento fattori di rischio
- miglioramento dei metodi diagnostici
- numerosi studi hanno contribuito ad un maggiore apprezzamento del suo carico di malattia .



Rosa Parisi, Deborah P.M. Symmons, Christopher E.M. Griffiths, Darren M. Ashcroft
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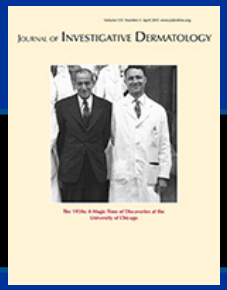
In tutto il mondo, la variazione in prevalenza sembra dipendere dalla distanza dall'equatore;

Con popolazioni situate più vicino all'equatore (Egitto, Tanzania, Sri Lanka, Taiwan) essendo meno colpiti da psoriasi rispetto a paesi più lontani da esso (Europa e Australia)



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PSORIASIS IS COMMON

Global epidemiological data are sparse. There is a lack of uniformity of data collection, so worldwide incidence and prevalence are poorly documented.

Some trends do emerge — for example, prevalence is higher closer to the poles. A combination of genetic and environmental factors are thought to be behind this pattern.

- Temperate (latitude above 40°)
- Subtropical (23–40°)
- Tropical (<23°)

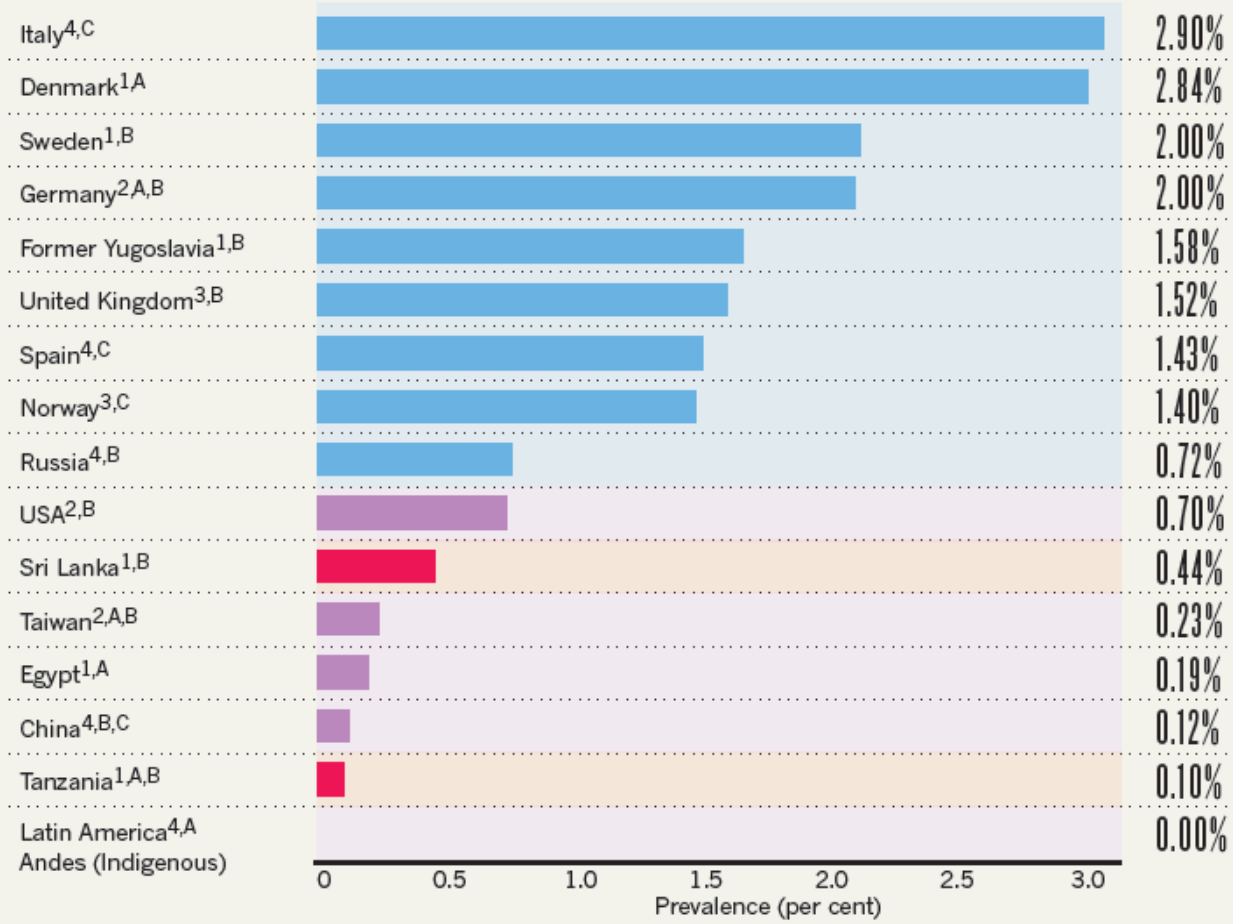
Study type

1 Point prevalence
2 Period prevalence
3 Lifetime prevalence
4 Not specified

Diagnostic method

A Dermatologist
B Physician
C Self-reported

2–3%
average global prevalence of psoriasis



SOURCE: PARISI, R. ET AL. J. INVEST. DERMATOL. DOI:10.1038/JID.2012.339 (2012)

Table 1. Major Psoriatic Gene Variants and Loci with Independent Replication.

Gene or Locus	Chromosomal Location	Odds Ratio for Disease	Comments	Other Disease Association	Reference
PSORS1	6p	6.4	Contains HLA-Cw6 (putative immune function) as major candidate gene and corneodesmosin	None	Trembath et al.,[8] Nair et al.,[9] Nair et al.[10]
PSORS2	17q	—	Putative role in immune synapse formation	None	Helms et al.[11]
IL12B	5q	1.4	T-cell differentiation	Crohn's disease	Cargill et al.,[12] Capon et al.,[13] Tsunemi et al.[14]
IL23R	1p	2.0	T-cell differentiation	Crohn's disease, ankylosing spondylitis, psoriatic arthritis	Nair et al.,[9] Cargill et al.,[12] Capon et al.,[13] Rahman et al.,[15] Rahman et al.,[16] Burton et al.[17]
ZNF313 (RNF114)	20q	1.25	Ubiquitin pathway	None	Nair et al.,[9] Capon et al.[18]
CDKAL1	6p	1.26	Unknown	Crohn's disease, type 2 diabetes mellitus	Wolf et al.,[19] Li et al.[20]
PTPN22	18p	1.3	T-cell signaling	Type 1 diabetes mellitus, juvenile idiopathic arthritis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune thyroid disease	Li et al.,[20] Hüffmeier et al.,[21] Smith et al.[22]
Interleukin-4–interleukin-13 cytokine-gene cluster	5q	1.27	T-cell differentiation	Crohn's disease (distinct variant)	Nair et al.,[9] Chang et al.[23]
LCE3B/3C	1q	1.31	Epidermal differentiation		de Cid et al.,[24] Zhang et al.[25]

Frank O. Nestle, M.D., Daniel H. Kaplan, M.D., Ph.D., and Jonathan Barker, M.D.
Mechanisms of Disease : Psoriasis. N Engl J Med 2009;361:496-509.

Fattori Ambientali

Il ruolo dei fattori ambientali nella patogenesi della psoriasi rimane in gran parte sconosciuta.

Diversi fattori ambientali, però possono scatenare l'insorgenza della psoriasi:

Pediatr Dermatol. 2011 May-Jun;28(3):306-12. doi: 10.1111/j.1525-1470.2011.01408.x.

Environmental risk factors in pediatric psoriasis: a multicenter case-control study.

Ozden MG, Tekin NS, Gürer MA, Akdemir D, Doğramacı C, Utaş S, Akman A, Evans SE, Bahadır S, Oztürkcan S, Ikizoğlu G, Sendur N, Köse O, Bek Y, Yaylı S, Cantürk T, Turanl AY.

Dermatology Department, Medical Faculty, Ondokuz Mayis University, Samsun, Turkey. mgulerozden@hotmail.com

	OR
✓ BMI (> 26)	2.52
✓ Esposizione al fumo di tabacco	2.90
✓ Stress	2.94

può influenzare lo sviluppo di psoriasi in età pediatrica

Fattori Ambientali

BMI

È stato dimostrato che il sovrappeso è un fattore di rischio per nuovi diagnosi di pazienti adulti affetti da psoriasi .

Recentemente la correlazione positiva tra BMI e psoriasi è stata dimostrata anche in età pediatrica.

Boccardi D, Menni S, La Vecchia C et al. Overweight and childhood psoriasis. Br J Dermatol 2009;161:484–486.

Obesity in Early Adulthood as a Risk Factor for Psoriatic Arthritis

Razieh Soltani-Arabshahi, MD; Bob Wong, PhD; Bing-Jian Feng, PhD; David E. Goldgar, PhD; Kristina Callis Duffin, MD; Gerald G. Krueger, MD

Arch Dermatol. 2010;146(7):721-726

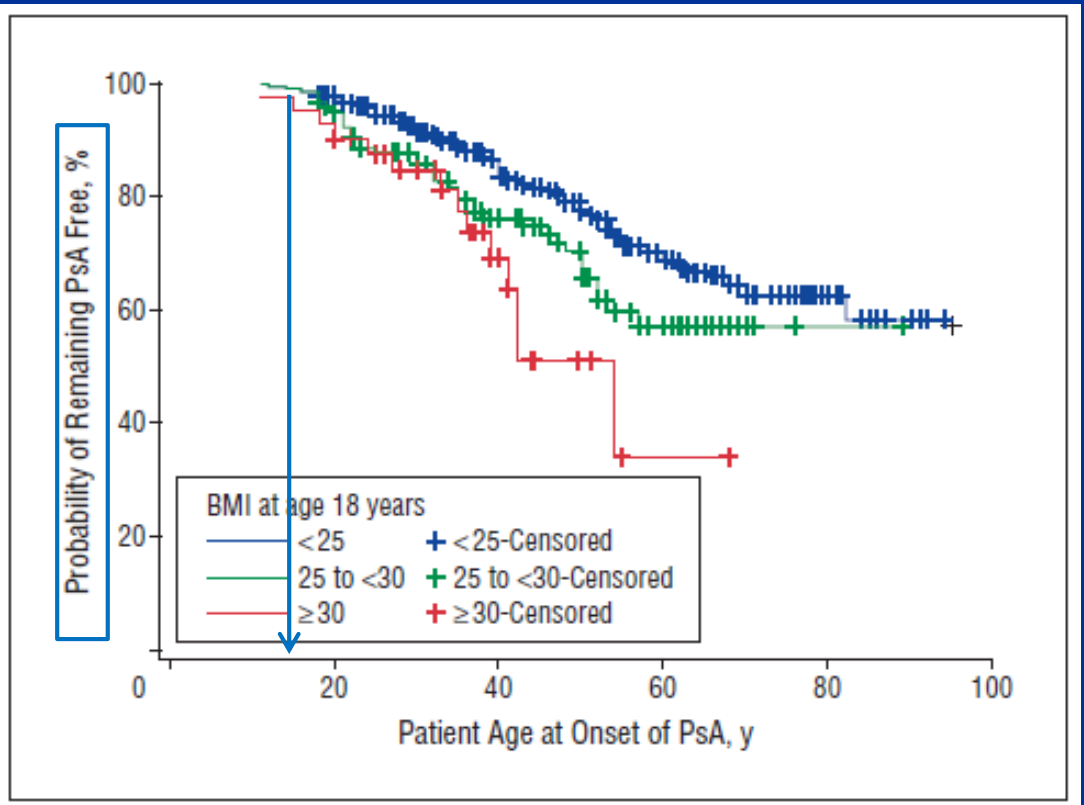


Figure 2. Time-to-event curve for development of psoriatic arthritis (PsA) based on body mass index (BMI) (calculated as weight in kilograms divided by height in meters squared) at age 18 years in the study population.

Fattori Ambientali

Vi è una necessità studi prospettici di larga scala per spiegare se l'obesità è un conseguenza o un fattore di rischio per la psoriasi nei bambini.

Ozden et al: Risk Factors for Pediatric Psoriasis Pediatric Dermatology Vol. 28 No. 3 May⁄ June 2011

Chi è obeso e per il solo fatto di essere obeso deve pensare che può avere più facilmente :

Acne

Irsutismo

Cheratosi Pilare

Acantosi Nigricans

Strie distesae

Psoriasi ?