LA NUTRIZIONE COME OCCASIONE DI INTEGRAZIONE FRA CLINICA E PREVENZIONE

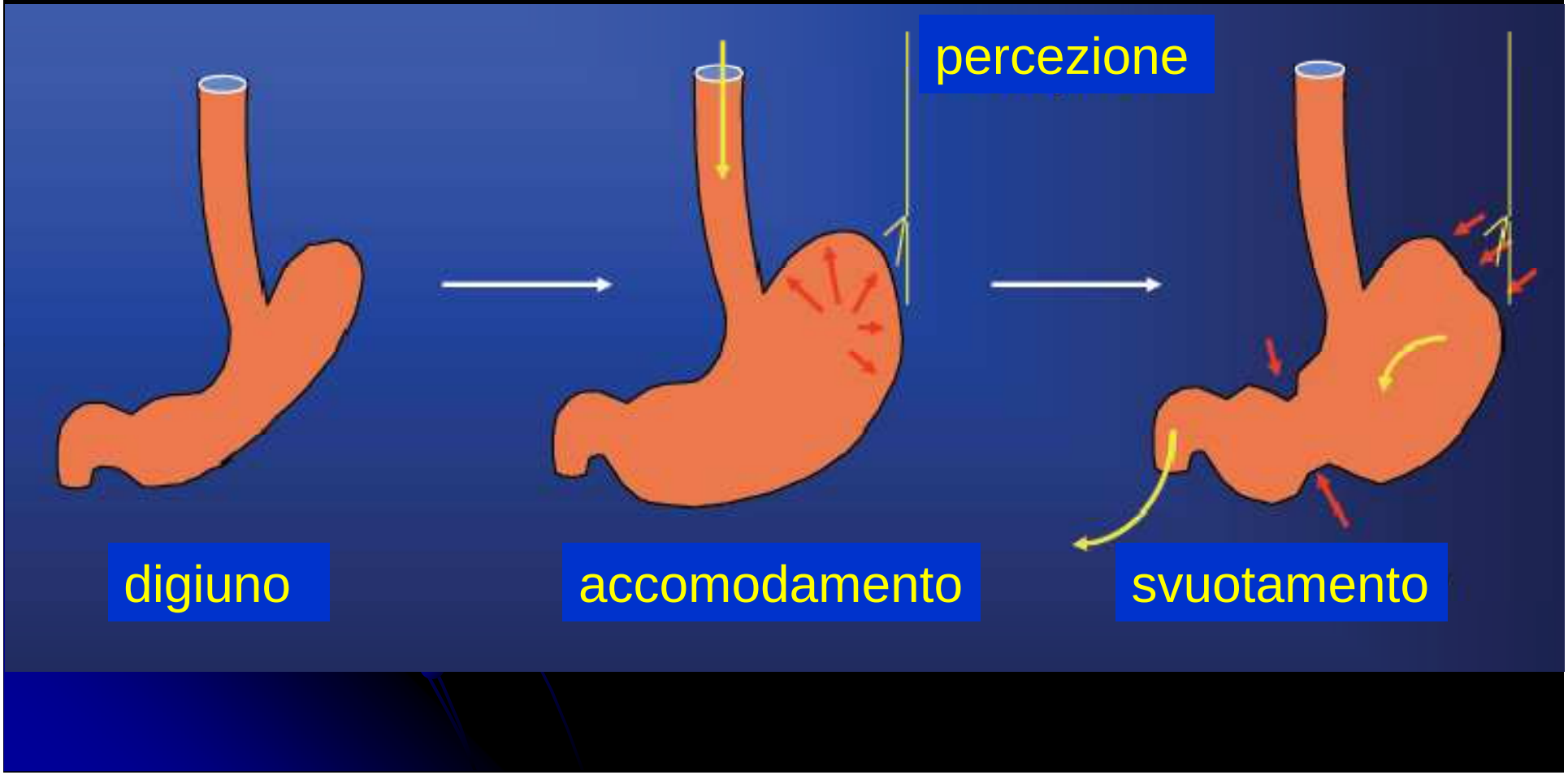
LA NUTRIZIONE CLINICA TRA PREVENZIONE, DIAGNOSI E CURA

prof Luigi Benini
Dip. Scienze Biomediche e Chirurgiche
Università di Verona

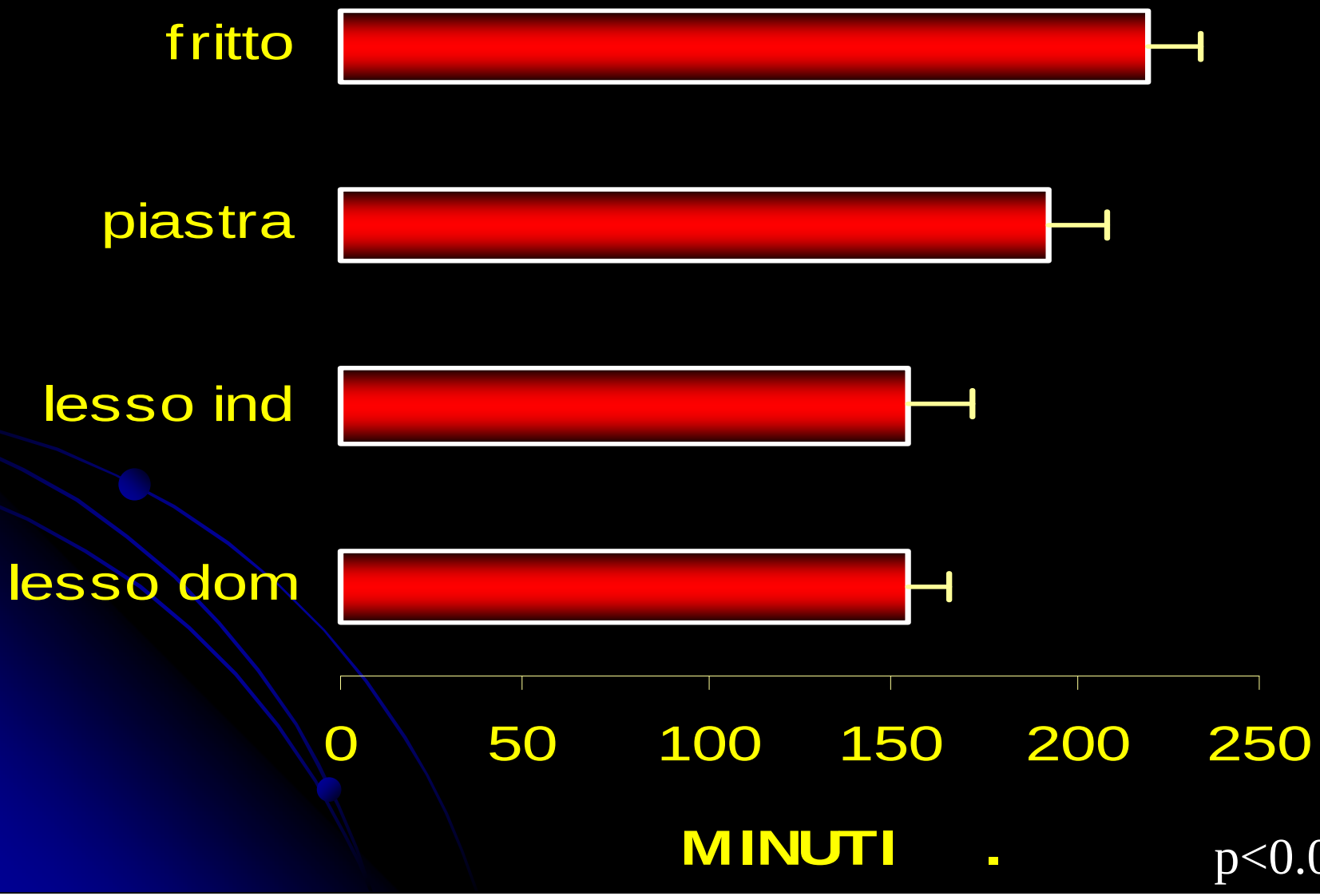
Dieta: interazioni con tratto digestivo

- Superiore
  - Dispepsia
  - Pirosi→ MRGE
- Tenue
  - Intolleranza al lattosio
  - Morbo celiaco
- Colon

Possibili origini dei sintomi

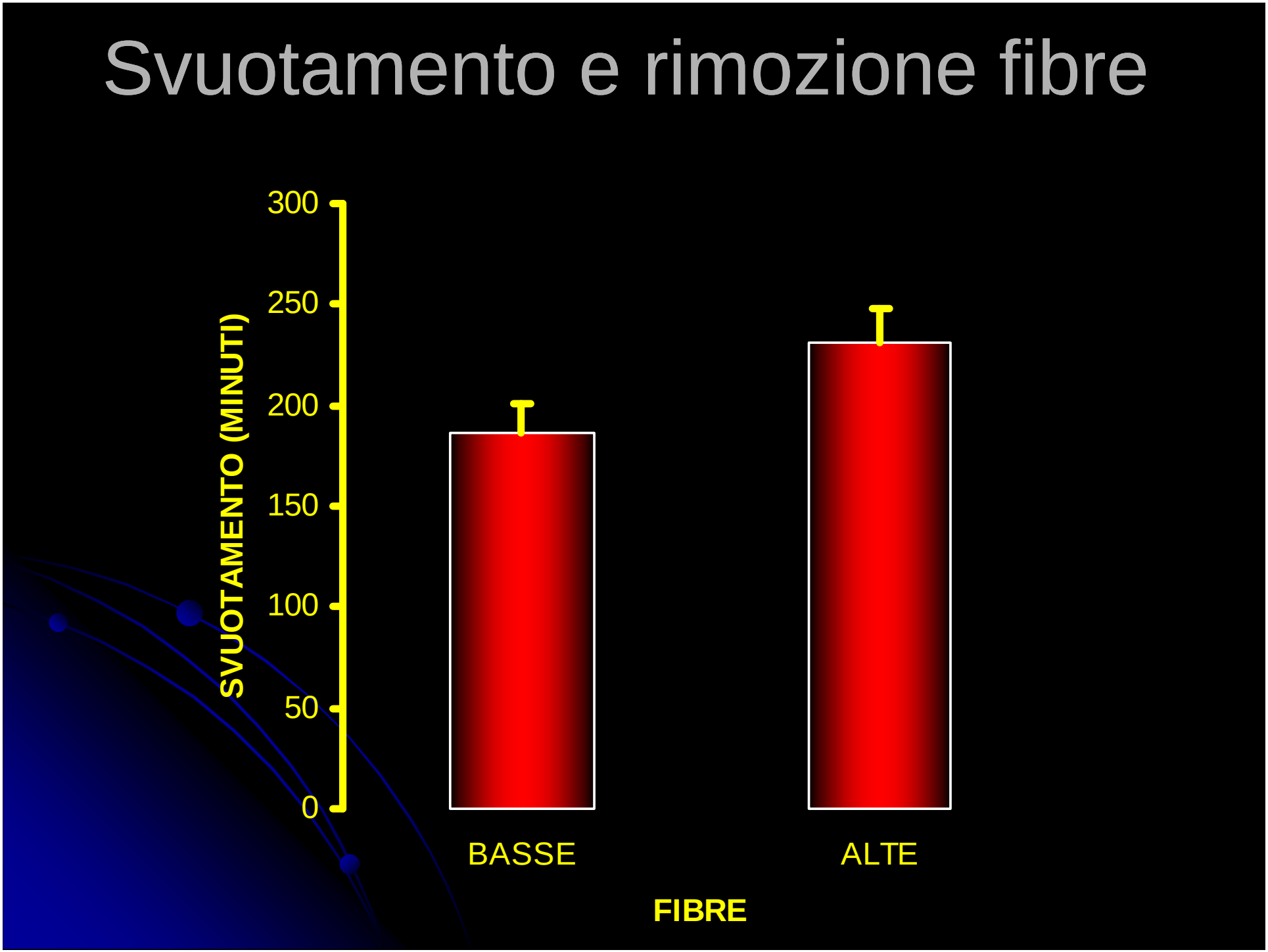


Svuotamento gastrico

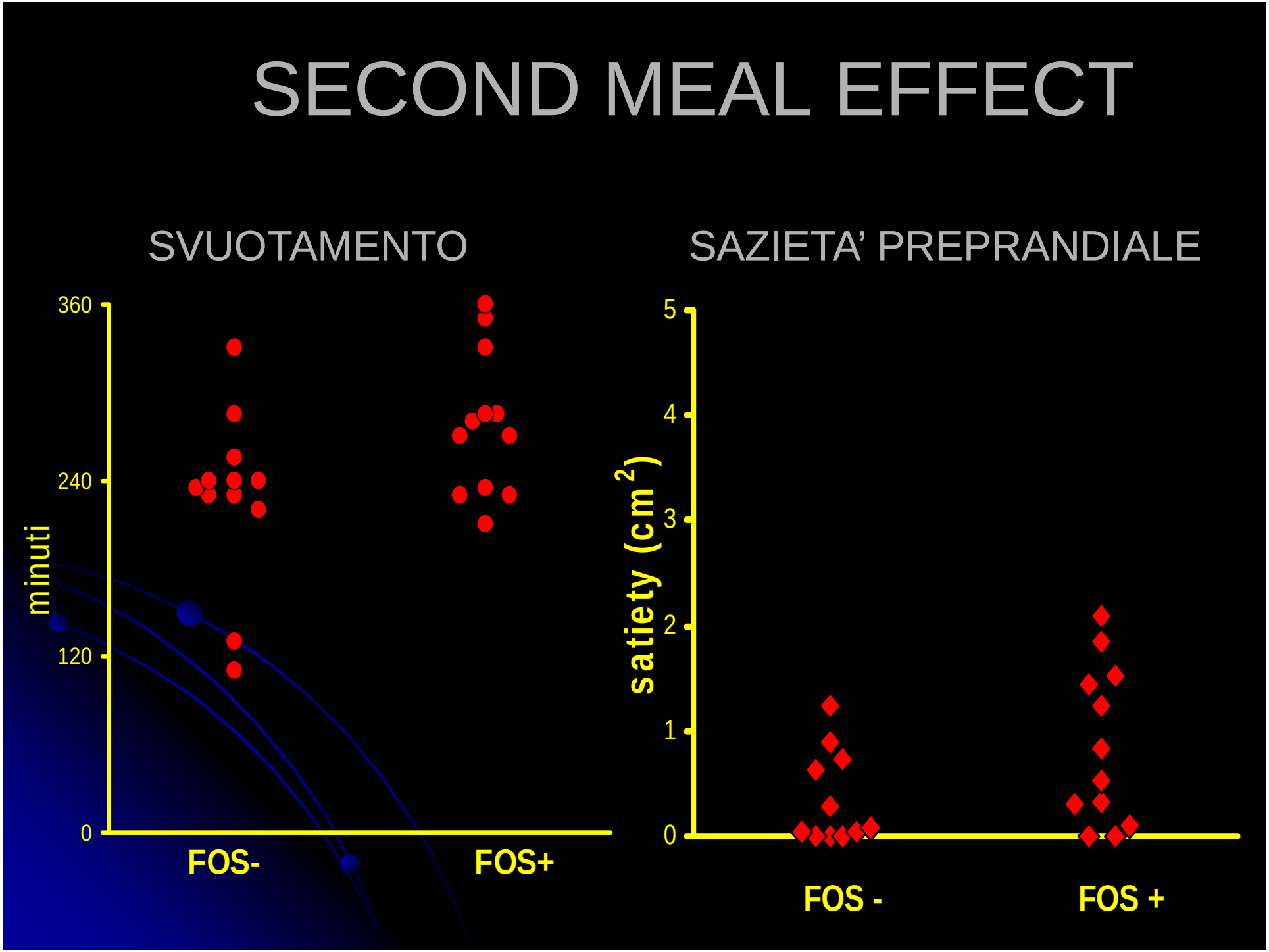


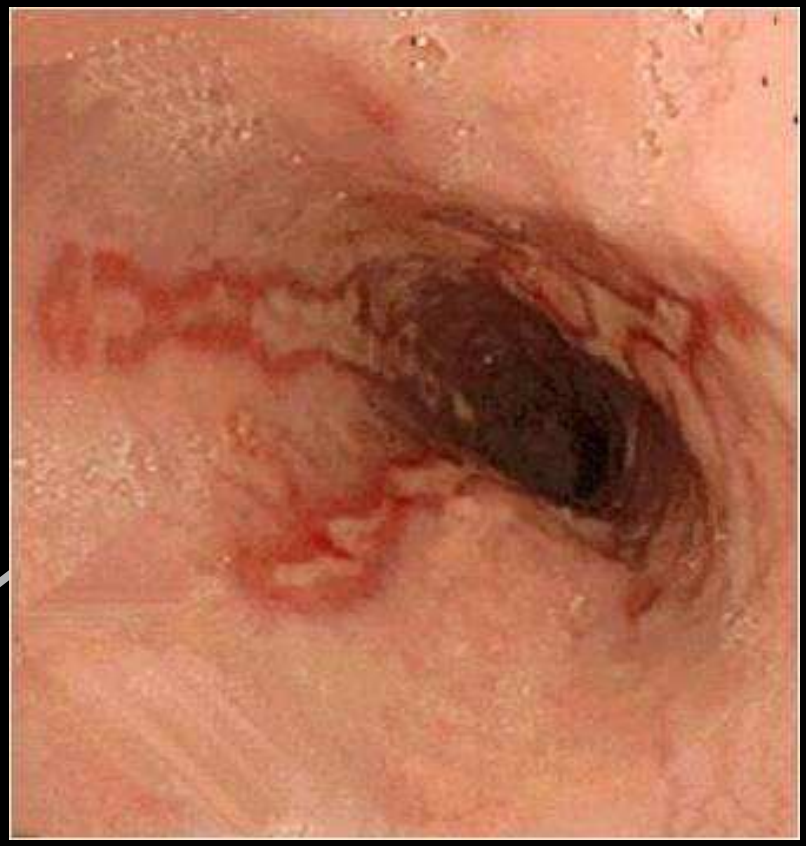
p<0.03

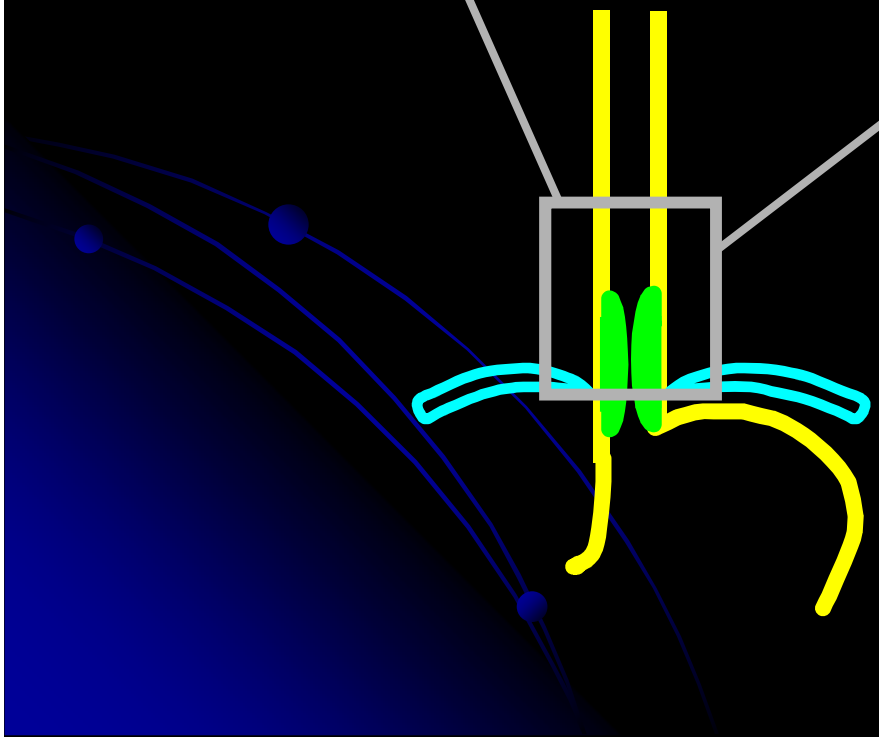
Svuotamento e rimozione fibre

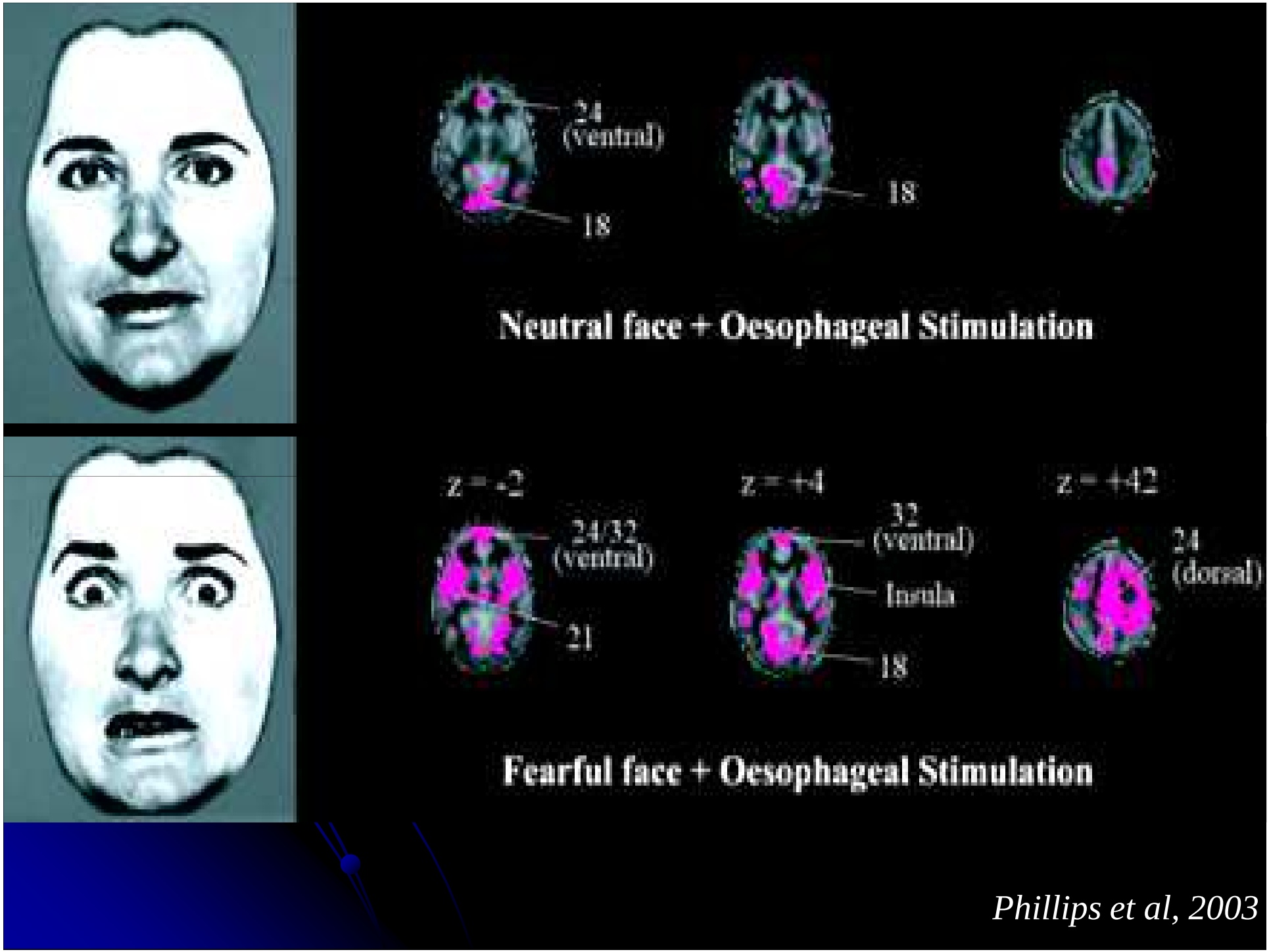


SECOND MEAL EFFECT









Phillips et al, 2003

Alimenti causa di pirosi nella MRGE

- menta (effetto antispastico)
- cioccolata (xantine)
- caffè (xantine) *(e caffè decaffeinato)*
- alcol (⬇pLES)
- succhi di frutta
- caramelle dolci
- cipolle (⬇svuotamento gastrico ?)
- peperoni (⬇svuotamento gastrico ?)
- fagioli e piselli (⬇ svuotamento gastrico ?)

CIPOLLA

- Non aumento del reflusso nei controlli
- Nella MRGE, aumento del 10-18%
- Vale solo per cipolla cruda
- Non dati per cipolla cotta o aglio

Allen ML, Mellow MH, Robinson MG, Ovr WC. The effect of raw onion on acid reflux and reflux symptoms. Am J Gastroenterol 1990;85:377-80.

GASTROENTEROLOGY 75:240–243, 1978
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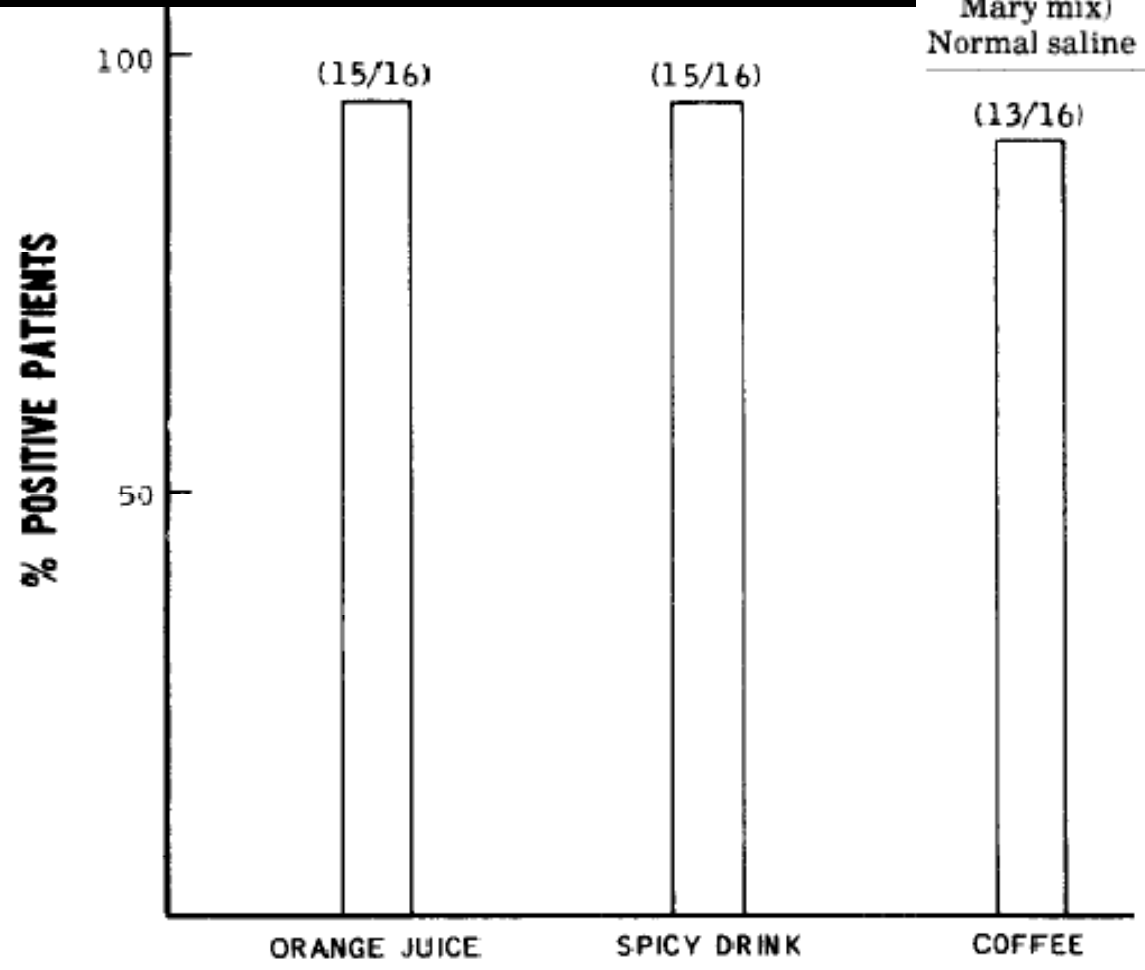
Vol. 75, No. 2
Printed in U.S.A.

[redacted]

FOOD SENSITIVITY IN REFLUX ESOPHAGITIS

STEVE F. PRICE, M.D., KENNETH W. SM
DONALD O. CASTELL, M.D.

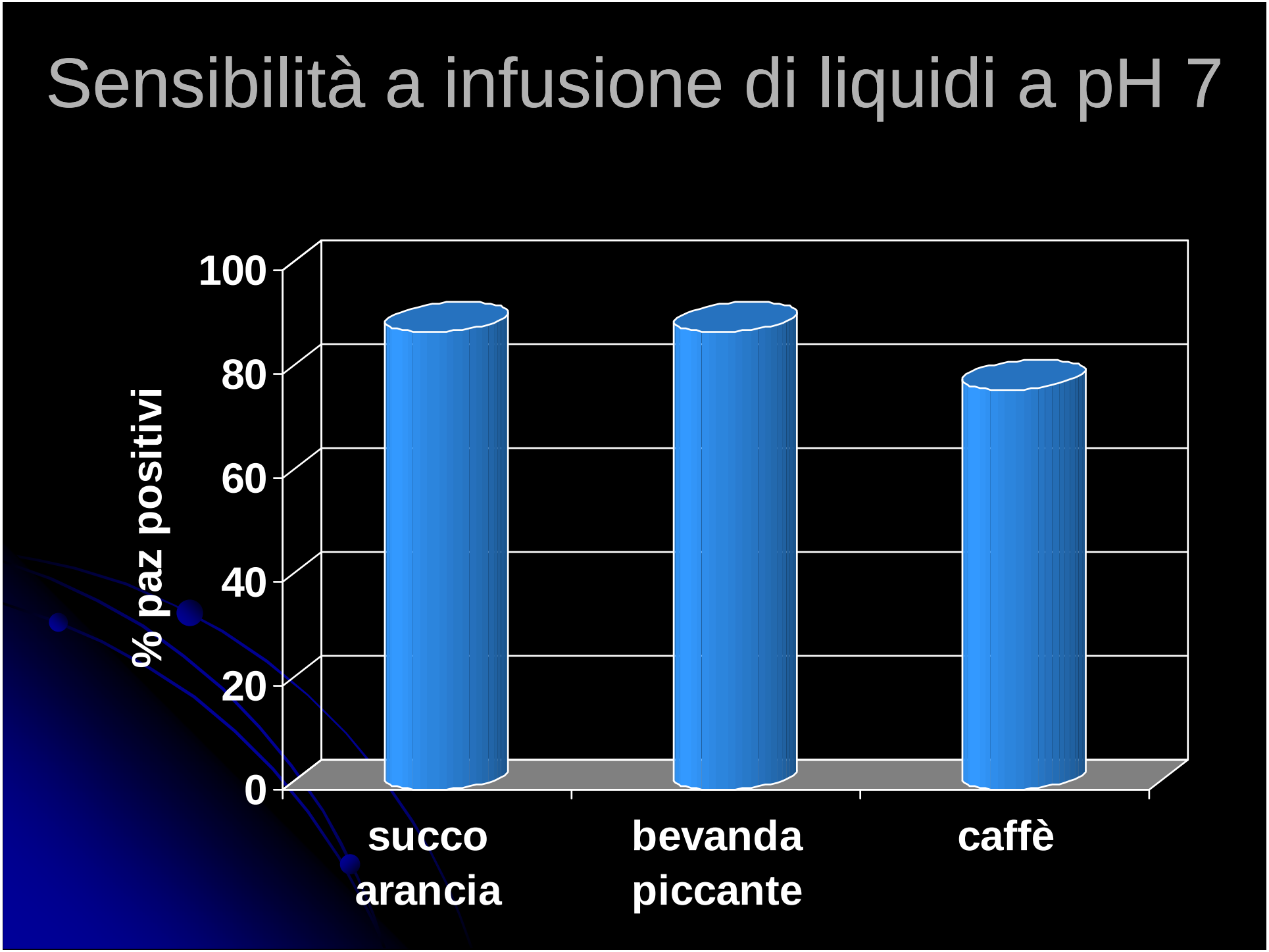
[redacted]



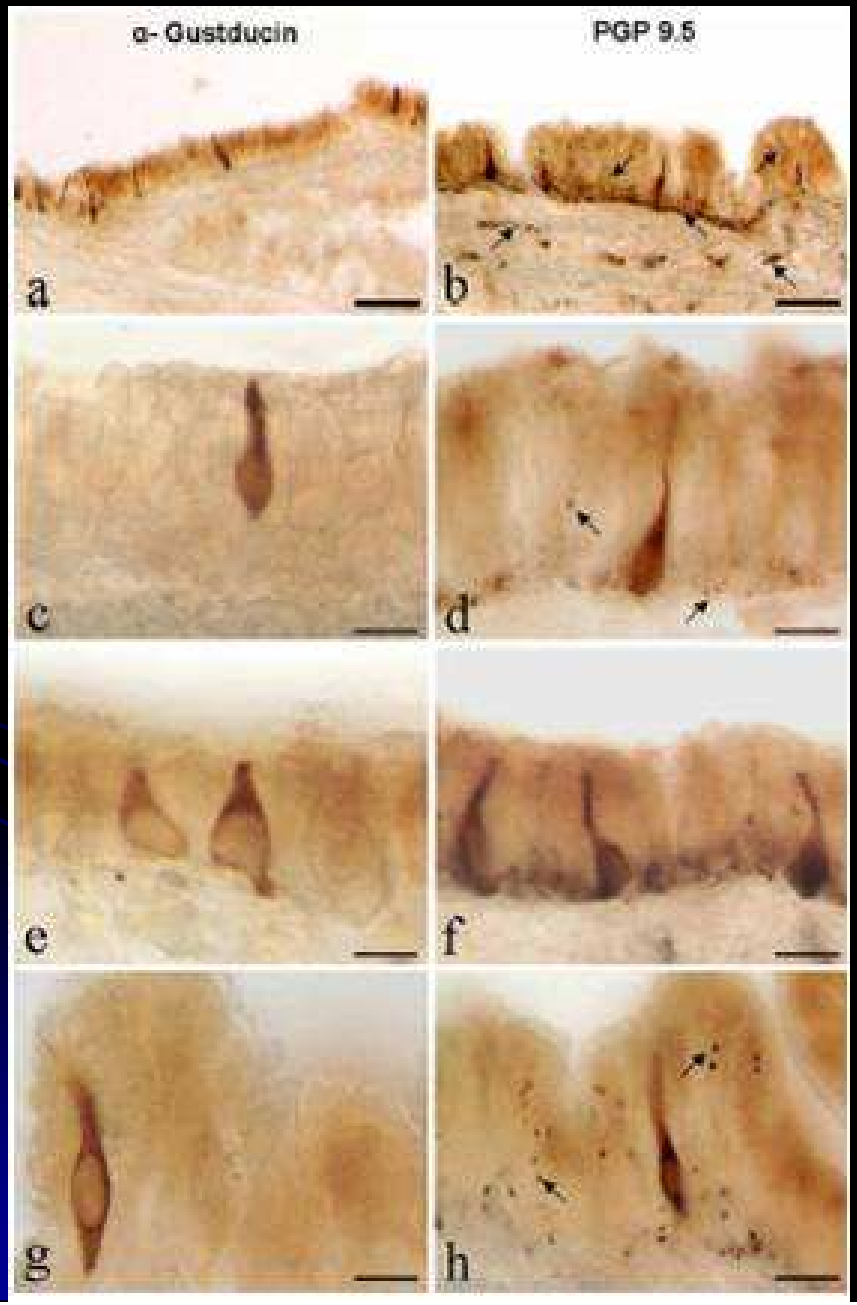
	pH	Titratable acid
		mEq/liter
Orange juice (Minute Maid)	3.73 ± 0.05	122 ± 3
Coffee (Taster's Choice)	5.25 ± 0.13	5.9 ± 1
Spicy tomato drink (Tabasco Bloody Mary mix)	4.10 ± 0.04	76 ± 2
Normal saline	5.20 ± 0.10	<1

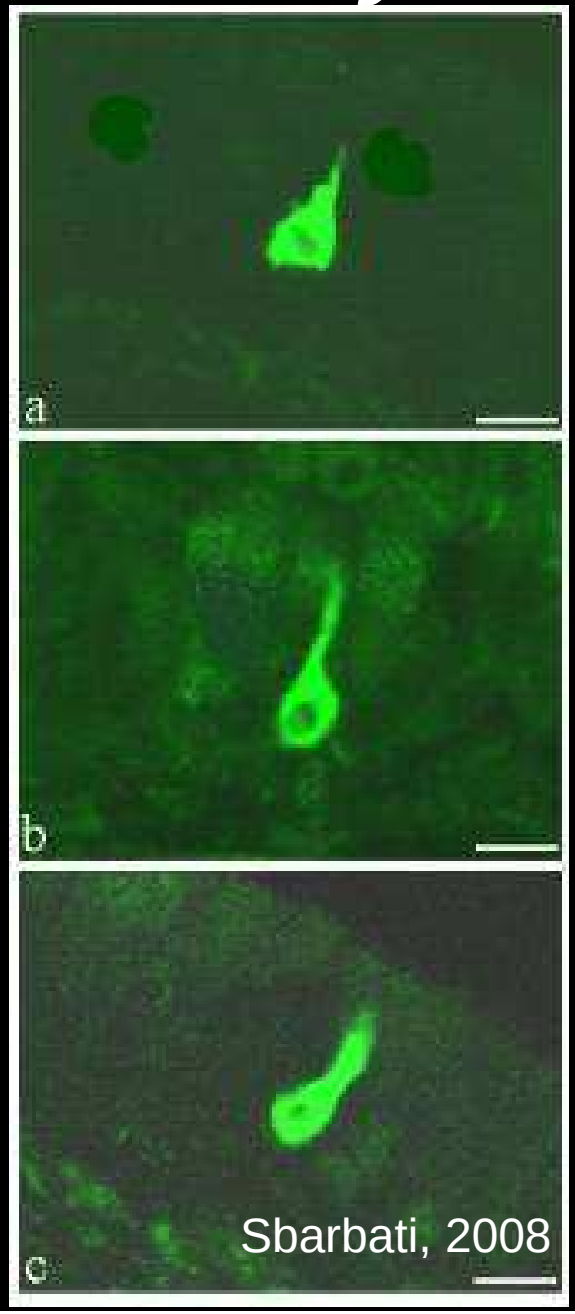
[redacted]

Sensibilità a infusione di liquidi a pH 7

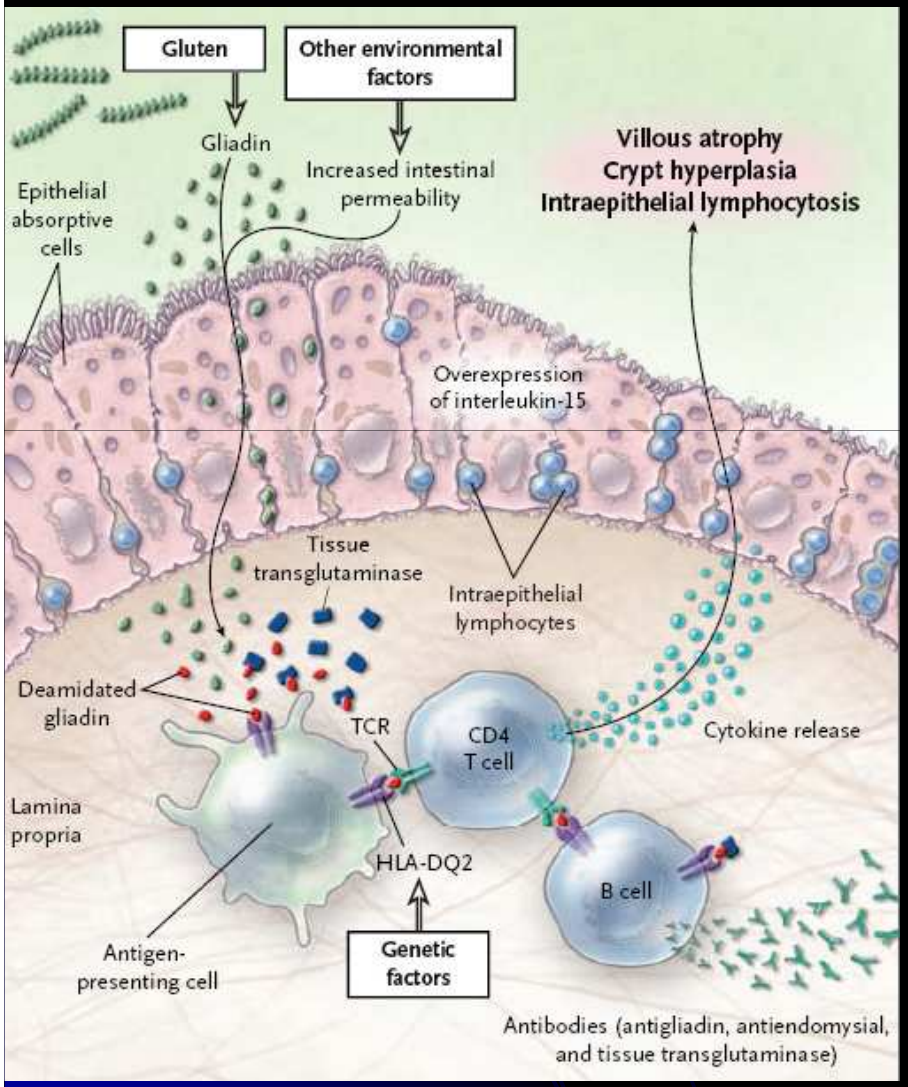


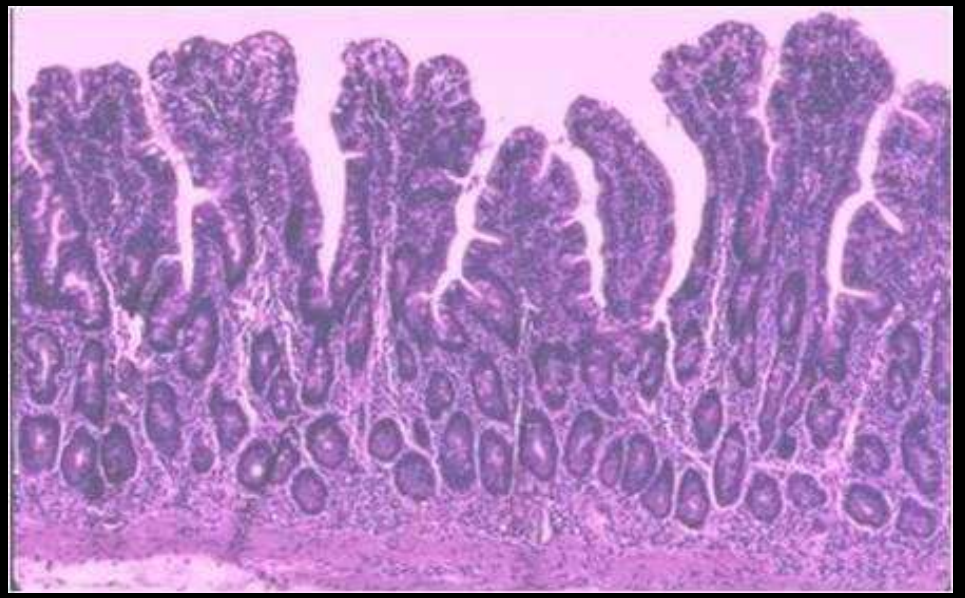
Le *Solitary chemosensory cells*

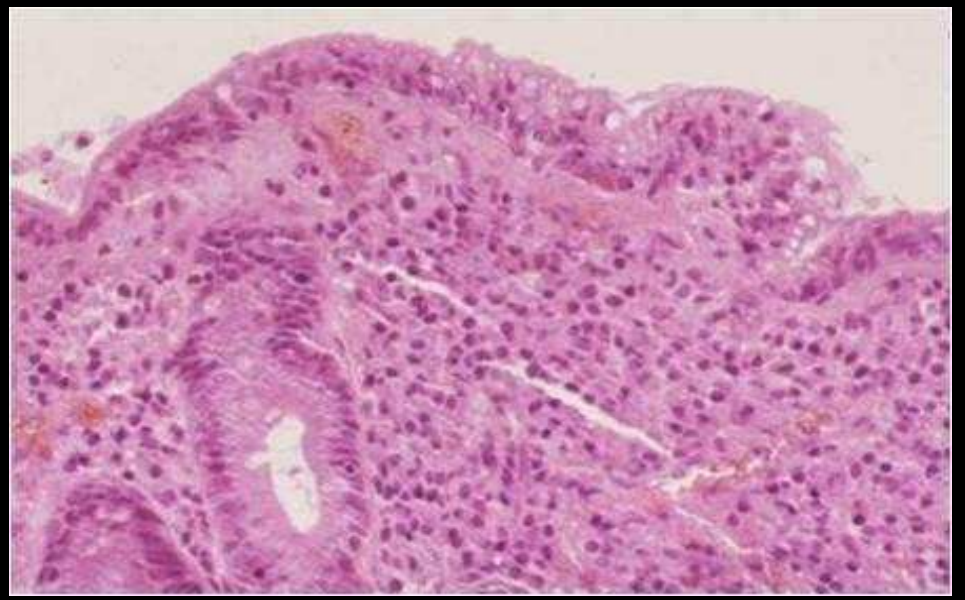




celiachia


Gluten
Other environmental factors
Gliadin
Increased intestinal permeability
Villous atrophy
Crypt hyperplasia
Intraepithelial lymphocytosis
Epithelial absorptive cells
Overexpression of interleukin-15
Tissue transglutaminase
Intraepithelial lymphocytes
Deamidated gliadin
TCR
CD4 T cell
Cytokine release
Lamina propria
HLA-DQ2
B cell
Antigen-presenting cell
Genetic factors
Antibodies (antigliadin, antiendomysial, and tissue transglutaminase)





Sequenza logica

1. Ricerca anticorpi (max antitransglutaminasi!)
2. Se positiva, biopsia in dieta libera
3. Solo se entrambe positive➔ dieta aglutinata

Linee dietetiche

- Evitare cibi con farine di frumento, orzo, segale
- Usare solo farine o amidi di riso, mais, miglio, soia, tapioca
- Leggere le etichette!

Dieta: utile per la diagnosi?

- Molto costosa.
- Molto pesante, anche socialmente, per il paziente
- Scarso rapporto dieta/sintomi
- Il glutine può causare sintomi aspecifici transitori (es, dopo gastroenterite acuta)
- Facile assunzione inconsapevole di glutine
- Rispondano o no, sono cavoli vostri!

→NO

Errori da evitare

- Scarsa adesione a lungo termine alle diete
- Eccessiva rigidità: si rischia un rifiuto totale
- Non tutte le celiachie sono uguali: non sappiamo quanto le diete debbano essere rigide nella celiachia silente!
- Aiutare i pazienti ad organizzarsi, per superare la paura di emarginazione

Ragioni di scarsa aderenza alla dieta

- Non sintomi pur violando la dieta
- Pasti fuori di casa
- Passaggio all’adolescenza
- Inadequato follow-up dopo la fanciullezza

Scarsa compliance alla dieta

- Scadente palatabilità
- Inadequata informazione
  - sulla malattia
  - sul contenuto in glutine di cibi
- Rifiuto del ruolo di malato

Fonti potenziali di glutine inapparente

- Birra; bevande fermentate (permesse le distillate)
- Zuppe, creme vegetali industriali
- Yogurt; gelati
- Salse, sughi
- insaccati
- Miscele per bevande, thè di erbe

Fonti potenziali di glutine inapparente

- Rossetti
- Medicine (pillole, capsule)
- Integratori alimentari
- Condimenti per insalate, patatine fritte
- Salsa di soya
- Particole da comunione

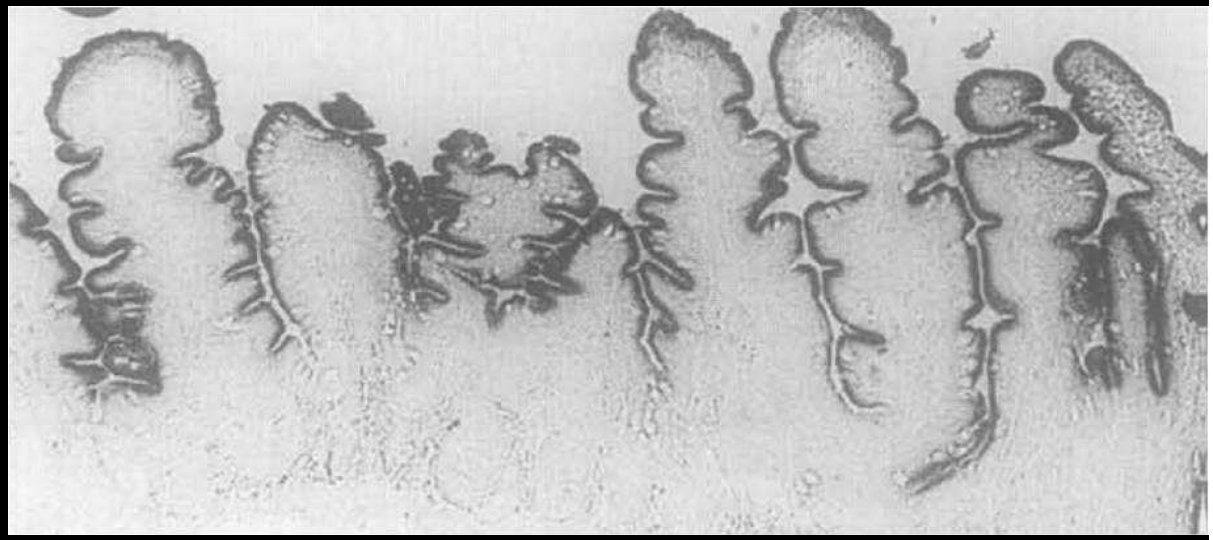
Ricordare:

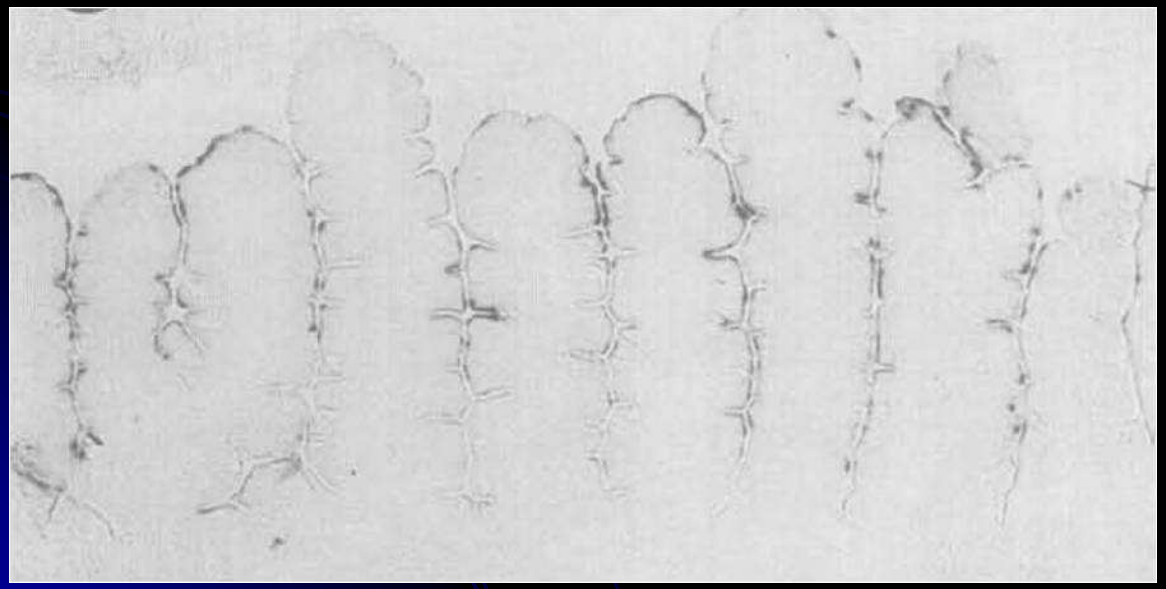
- Il glutine è ciò che dà elasticità/consistenza al pane→ rischia di essere “gnecco”
- Farine senza glutine lievitano solo una volta → imparare a cucinarle.
- Comprare libri di ricette per celiaci (rischio di isolarli per evitare di invitarli a cena)
- Identificare ristoranti/pizzerie per celiaci (due diversi forni!)

DEFICIT DI LATTASI

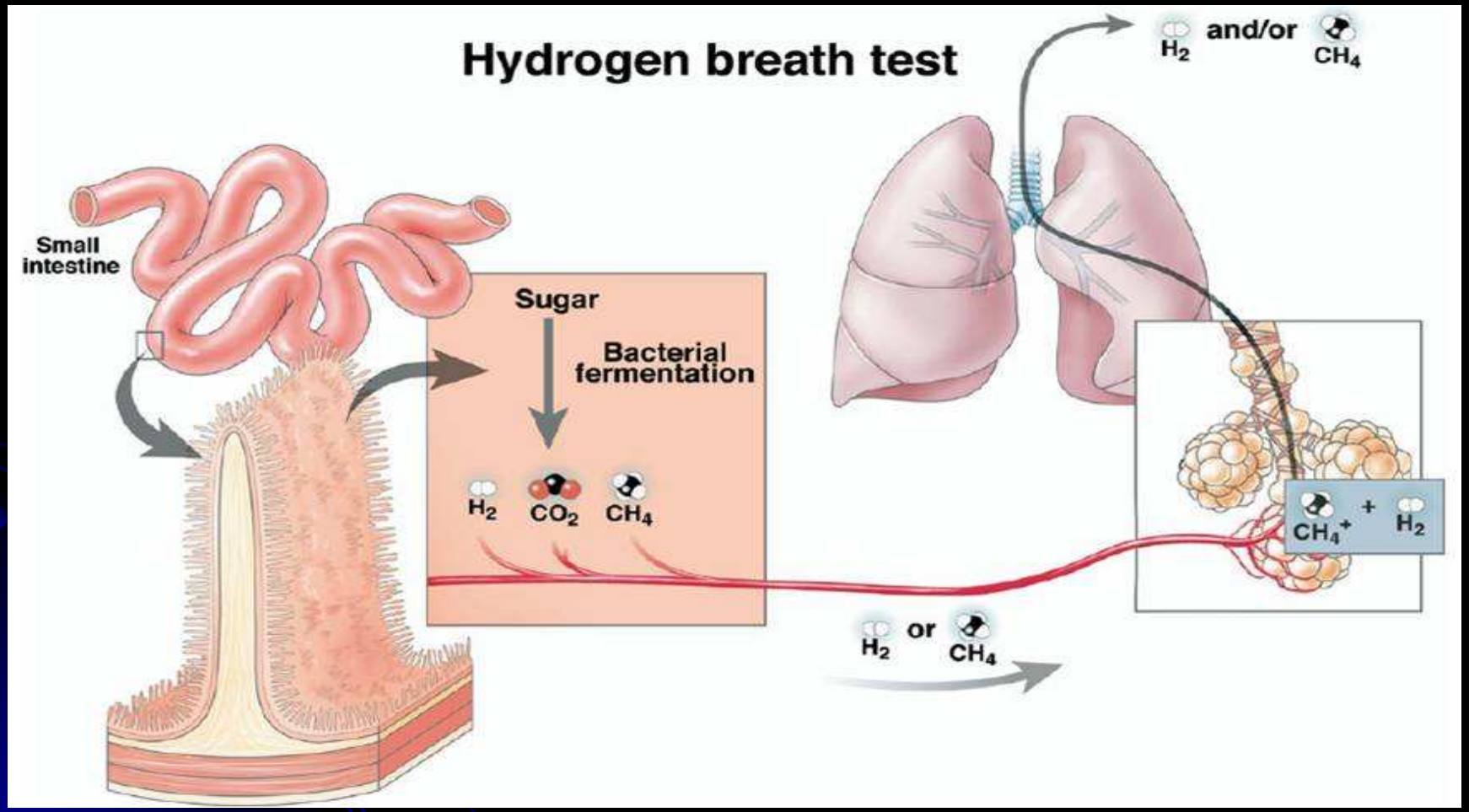
- SECONDARIO
  - Patologie della mucosa
- CONGENITO
  - Rarissimo (40 casi; incapacità a crescere)
- PRIMITIVO
  - Dell’adulto (geneticamente determinato)
  - Del prematuro (la lattasi compare tardivamente)

Deficit di lattasi

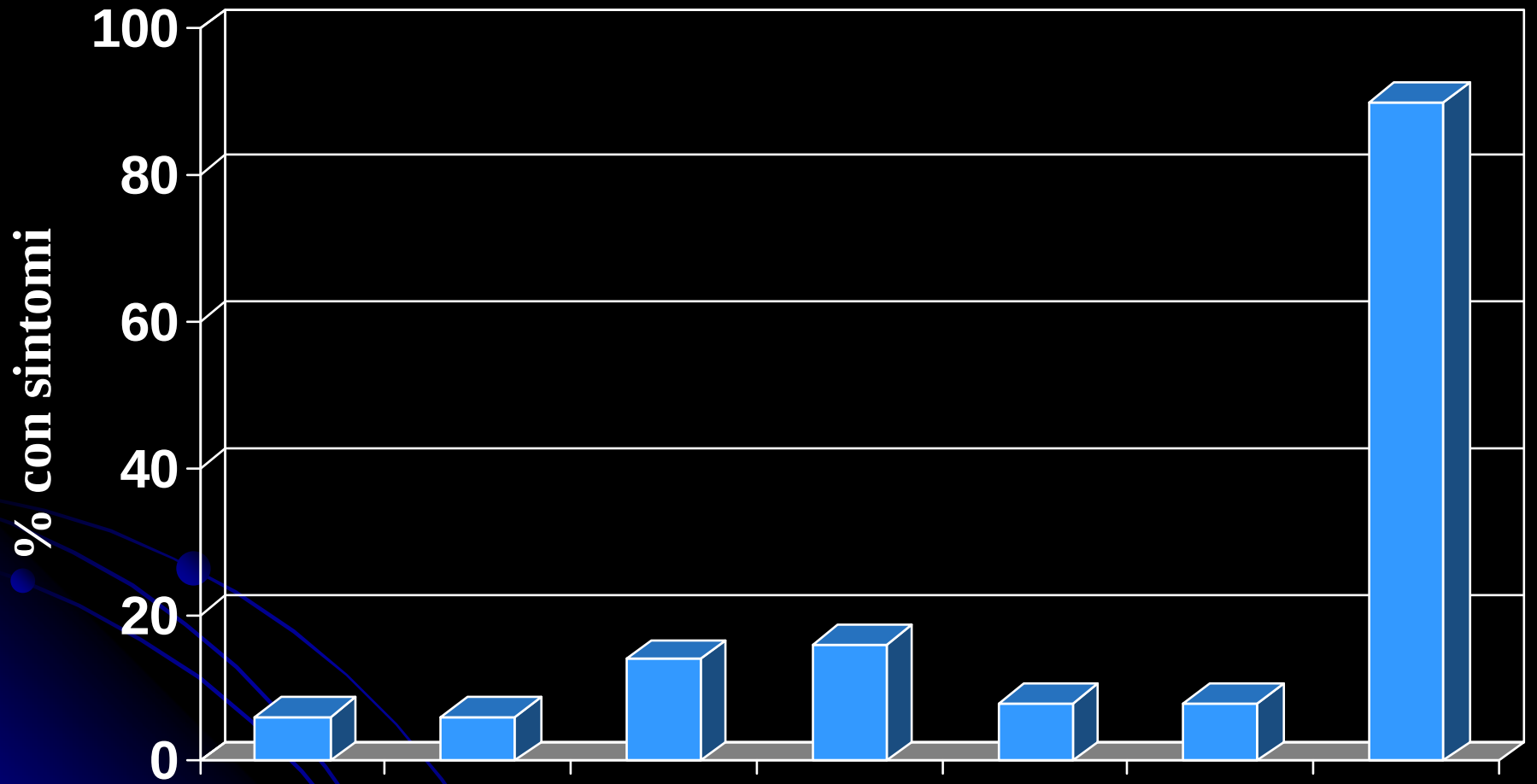




Maiuri, Gastroenterology 1993


Hydrogen breath test
H_2 and/or CH_4
Small intestine
Sugar
Bacterial fermentation
H_2 CO_2 CH_4
CH_4 + H_2
H_2 or CH_4

% dei malabsorbers di lattosio sintomatici e dose



Newcomer, Gastroenterology 1998

Lattosio e latte

• di mucca scremato	4,7
• di mucca parzialmente scremato	4,6
• di mucca intero	4,5
• privo di Lattosio (Zymil, Accadì ecc.)	0,5
• di pecora	4,5
• di capra	4,2
• di bufala	4,9

Lattosio e Latticini soffici

- Yoghurt
  - intero 3,2
  - parzialmente scremato 3,3
  - scremato 3,1
  - alla frutta 3,1
- Panna 4,1
- Burro 4
- Fiocchi di latte 2,6
- Mozzarella (e formaggi freschi) 4,1
- Formaggino (tipo Mio, Tigre) 6
- Ricotta di pecora 3,2
- Crema Bel Paese 3,2

Lattosio e Latticini soffici

- Formaggio svizzero tracce
- Brie tracce
- Toma tracce
- Ricotta di mucca tracce
- Asiago tracce
- Caciocavallo tracce
- Caciotta toscana tracce
- Certosino tracce
- Emmenthal tracce
- Fontina tracce
- Fontina tracce
- Gorgonzola tracce
- Grana Padano tracce
- Parmigiano stagionato tracce
- Mascarpone tracce
- Pecorino tracce
- Provola dolce/affumicata tracce
- Robiola tracce
- Scamorza tracce
- Taleggio tracce

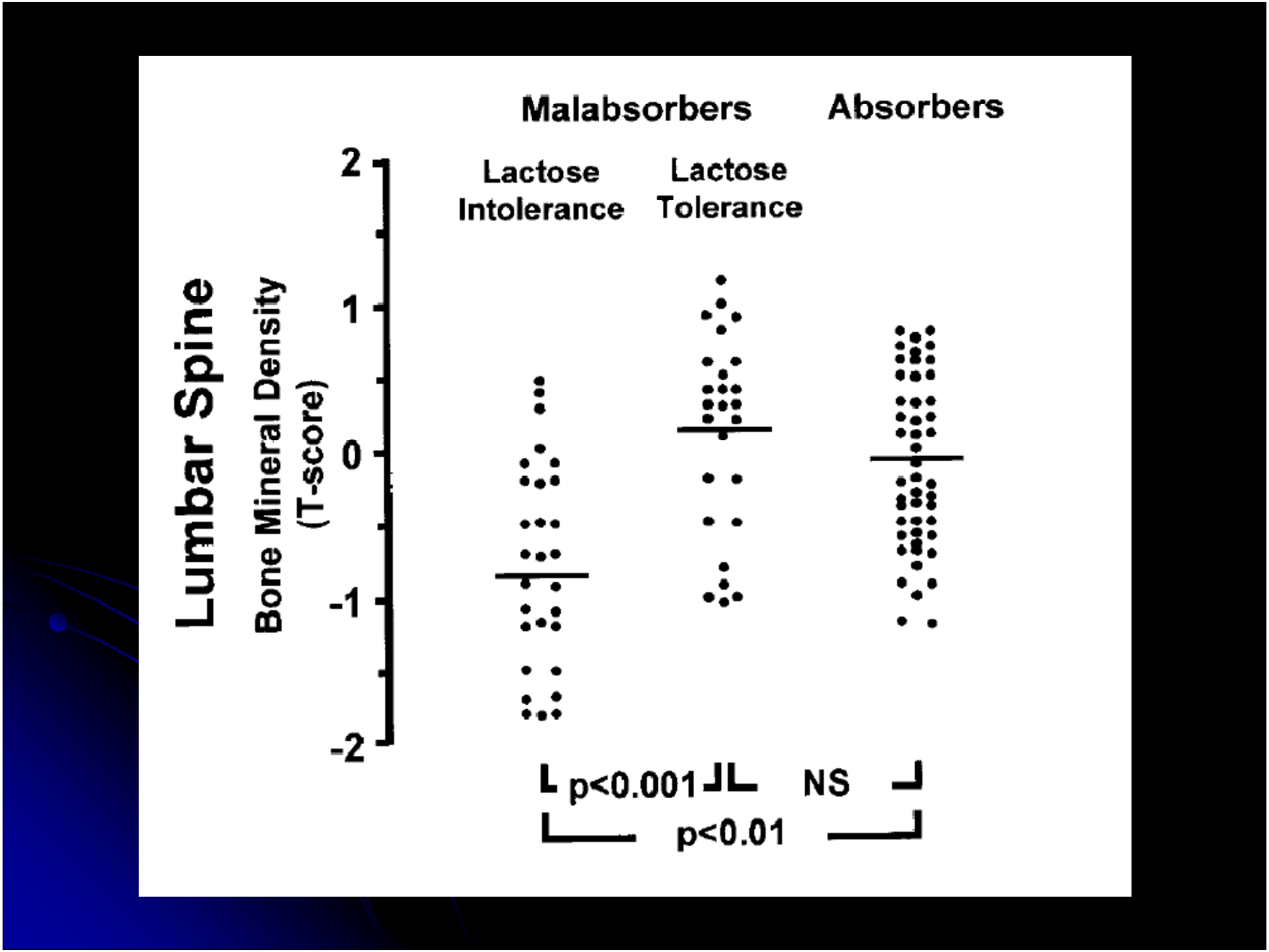
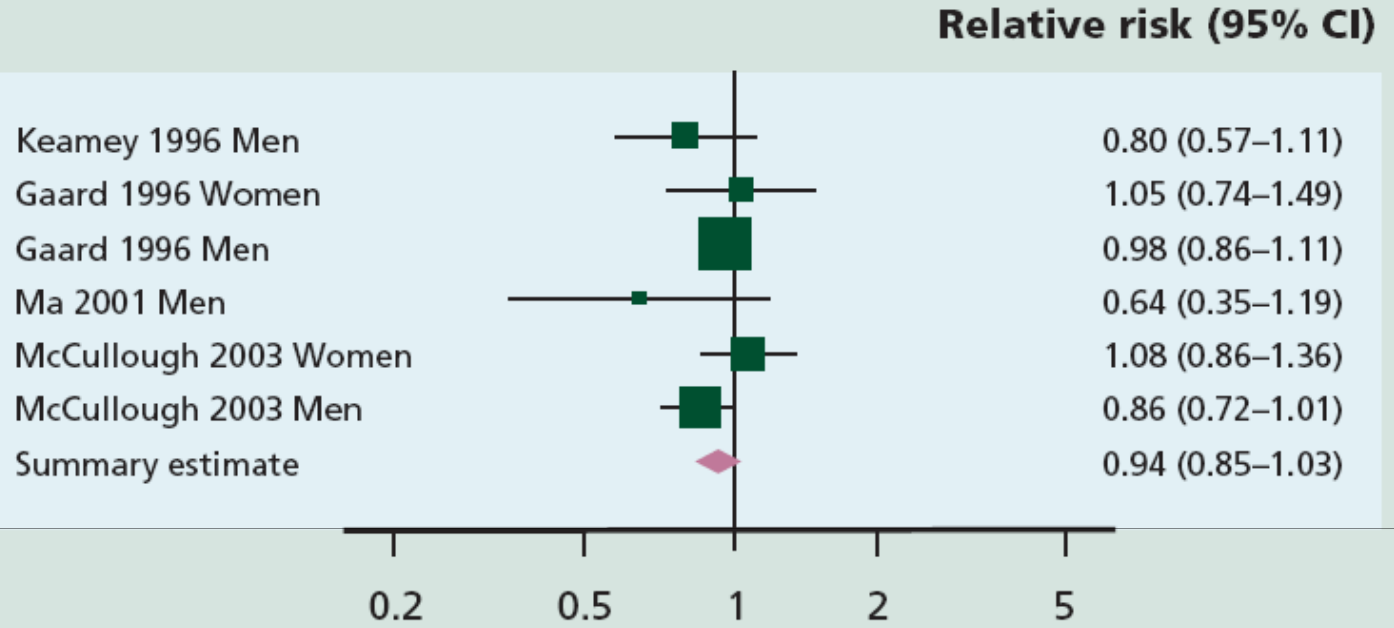

Malabsorbers
Absorbers
Lactose Intolerance
Lactose Tolerance
Lumbar Spine
Bone Mineral Density (T-score)
2
1
0
-1
-2
p<0.001
NS
p<0.01

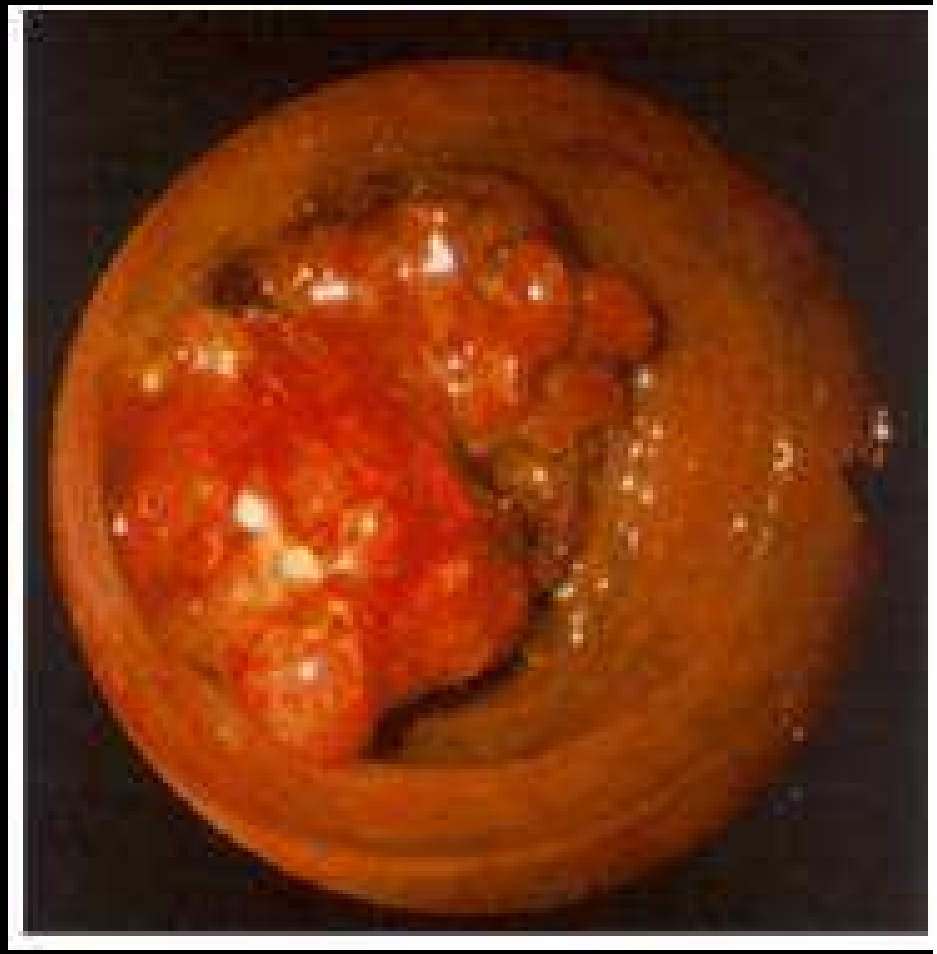
Figure 4.4.1 Milk and colorectal cancer; cohort studies



Dairy Foods, Calcium, and Colorectal Cancer: A Pooled Analysis of 10 Cohort Studies J Natl Cancer Inst 2004;96:1015–22]

Cases and RRs	Intake category (g/day)				P_{trend}
			Milk†		
	<70	70–174	175–249	≥250	
No. of cancer cases	4946	1065	1360	1154	
Age-adjusted RR (95% CI)	1.00 (referent)	0.94 (0.86 to 1.02)	0.87 (0.80 to 0.95)	0.84 (0.77 to 0.92)	<.001
Multivariate‡ RR (95% CI)	1.00 (referent)	0.94 (0.86 to 1.02)	0.88 (0.81 to 0.96)	0.85 (0.78 to 0.94)	<.001

Stipsi di recente insorgenza



Alta incidenza di CRC

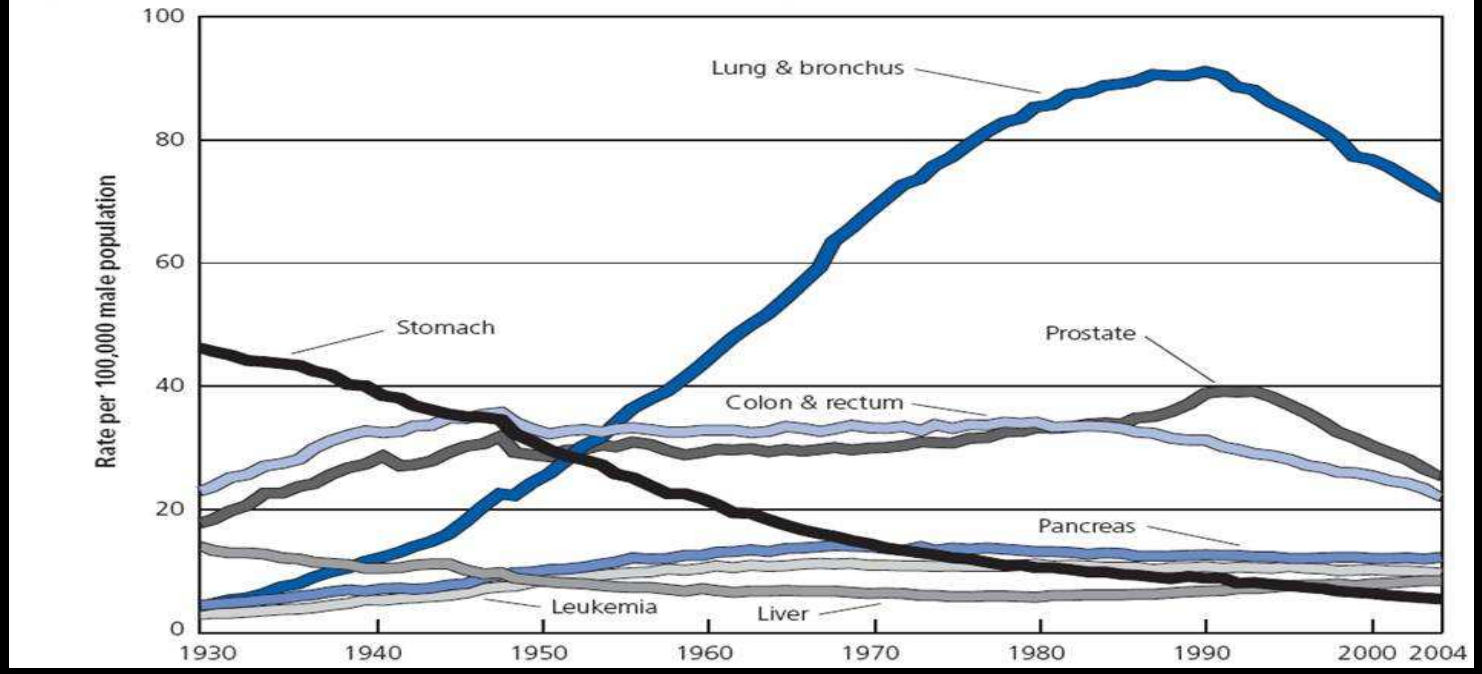
Cancer Facts & Figures 2008

American Cancer Society®

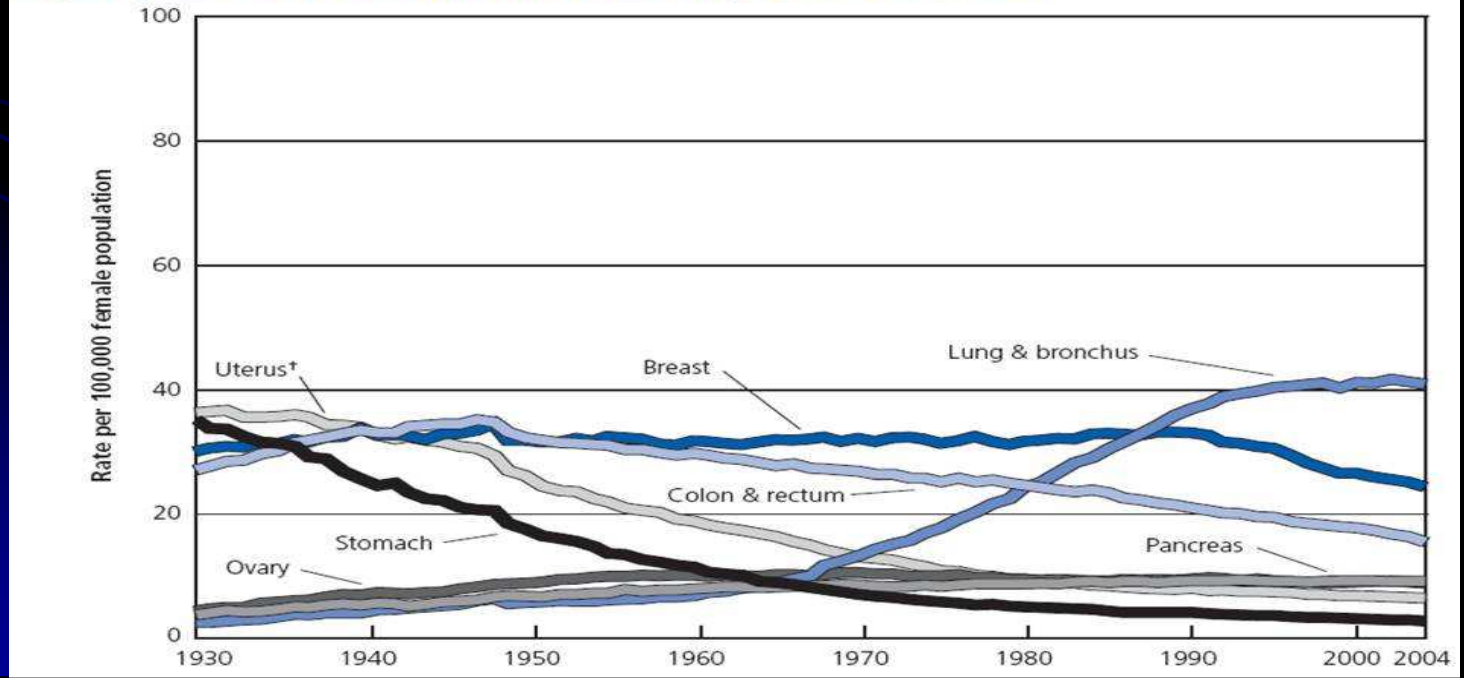
Probability of Developing Invasive Cancers Over Selected Age Intervals by Sex, US, 2002-2004*

		Birth to 39 (%)	40 to 59 (%)	60 to 69 (%)	70 and Older (%)	Birth to Death (%)
All sites†	Male	1.42 (1 in 70)	8.58 (1 in 12)	16.25 (1 in 6)	38.96 (1 in 3)	44.94 (1 in 2)
	Female	2.04 (1 in 49)	8.97 (1 in 11)	10.36 (1 in 10)	26.31 (1 in 4)	37.52 (1 in 3)
Urinary bladder‡	Male	0.02 (1 in 4,477)	0.41 (1 in 244)	0.96 (1 in 104)	3.50 (1 in 29)	3.70 (1 in 27)
	Female	0.01 (1 in 9,462)	0.13 (1 in 790)	0.26 (1 in 384)	0.99 (1 in 101)	1.17 (1 in 85)
Breast	Female	0.48 (1 in 210)	3.86 (1 in 26)	3.51 (1 in 28)	6.95 (1 in 15)	12.28 (1 in 8)
Colon & rectum	Male	0.08 (1 in 1,329)	0.92 (1 in 109)	1.60 (1 in 63)	4.78 (1 in 21)	5.65 (1 in 18)
	Female	0.07 (1 in 1,394)	0.72 (1 in 138)	1.12 (1 in 89)	4.30 (1 in 23)	5.23 (1 in 19)
Lung & bronchus	Male	0.03 (1 in 3,357)	1.03 (1 in 97)	2.52 (1 in 40)	6.74 (1 in 15)	7.91 (1 in 13)
	Female	0.03 (1 in 2,964)	0.82 (1 in 121)	1.81 (1 in 55)	4.61 (1 in 22)	6.18 (1 in 16)
Melanoma of the skin	Male	0.15 (1 in 656)	0.61 (1 in 164)	0.66 (1 in 151)	1.56 (1 in 64)	2.42 (1 in 41)
	Female	0.26 (1 in 389)	0.50 (1 in 200)	0.34 (1 in 297)	0.71 (1 in 140)	1.63 (1 in 61)
Non-Hodgkin lymphoma	Male	0.13 (1 in 760)	0.45 (1 in 222)	0.57 (1 in 174)	1.61 (1 in 62)	2.19 (1 in 46)
	Female	0.08 (1 in 1,212)	0.32 (1 in 312)	0.45 (1 in 221)	1.33 (1 in 75)	1.87 (1 in 53)
Prostate	Male	0.01 (1 in 10,553)	2.54 (1 in 39)	6.83 (1 in 15)	13.36 (1 in 7)	16.72 (1 in 6)

Age-Adjusted Cancer Death Rates,* Males by Site, US, 1930-2004



Age-Adjusted Cancer Death Rates,* Females by Site, US, 1930-2004

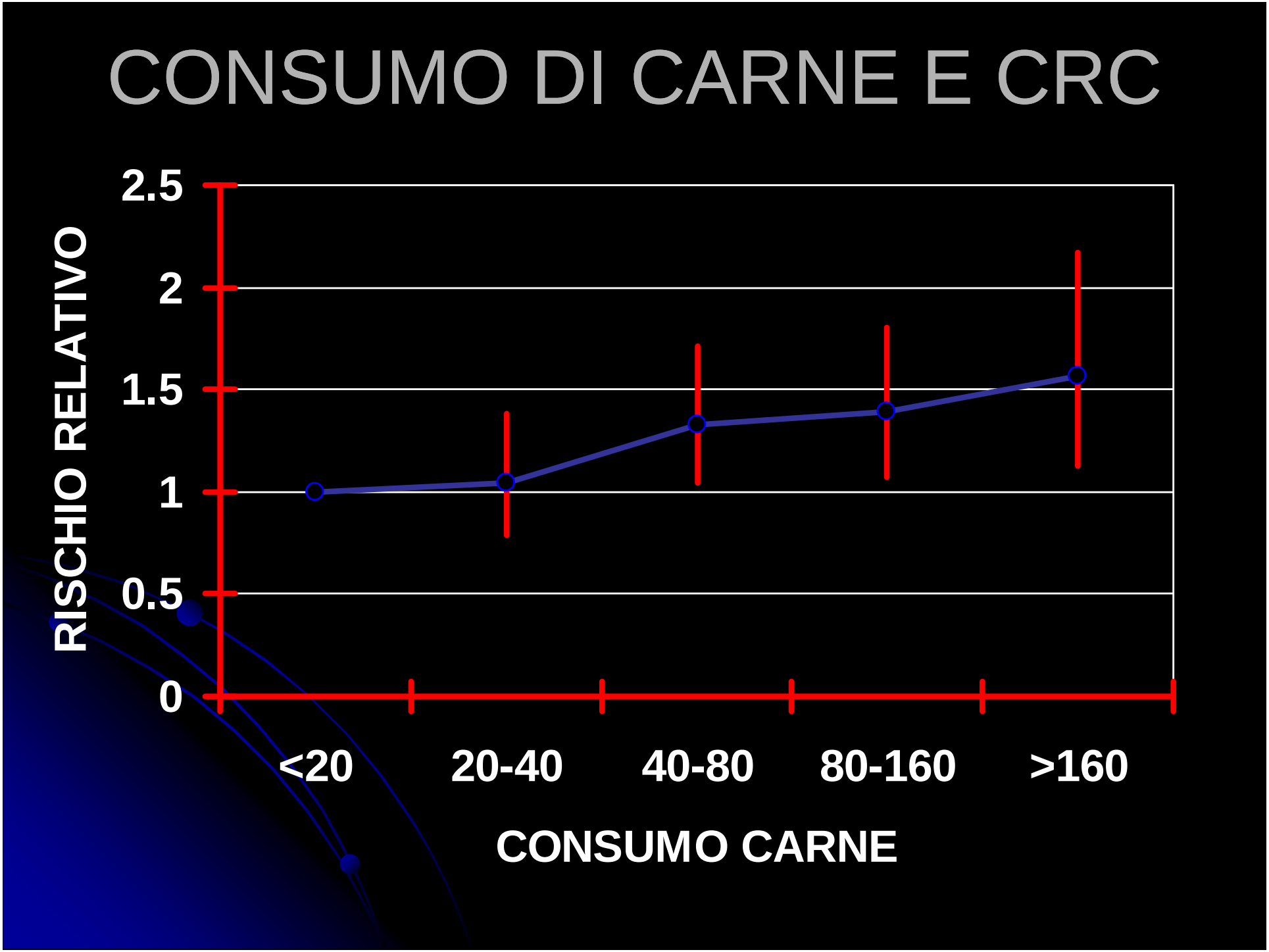


J Natl Cancer Inst. 2005 June ; 97(12): 906–916.

Meat, fish, and colorectal cancer risk: the European Prospective Investigation into cancer and nutrition

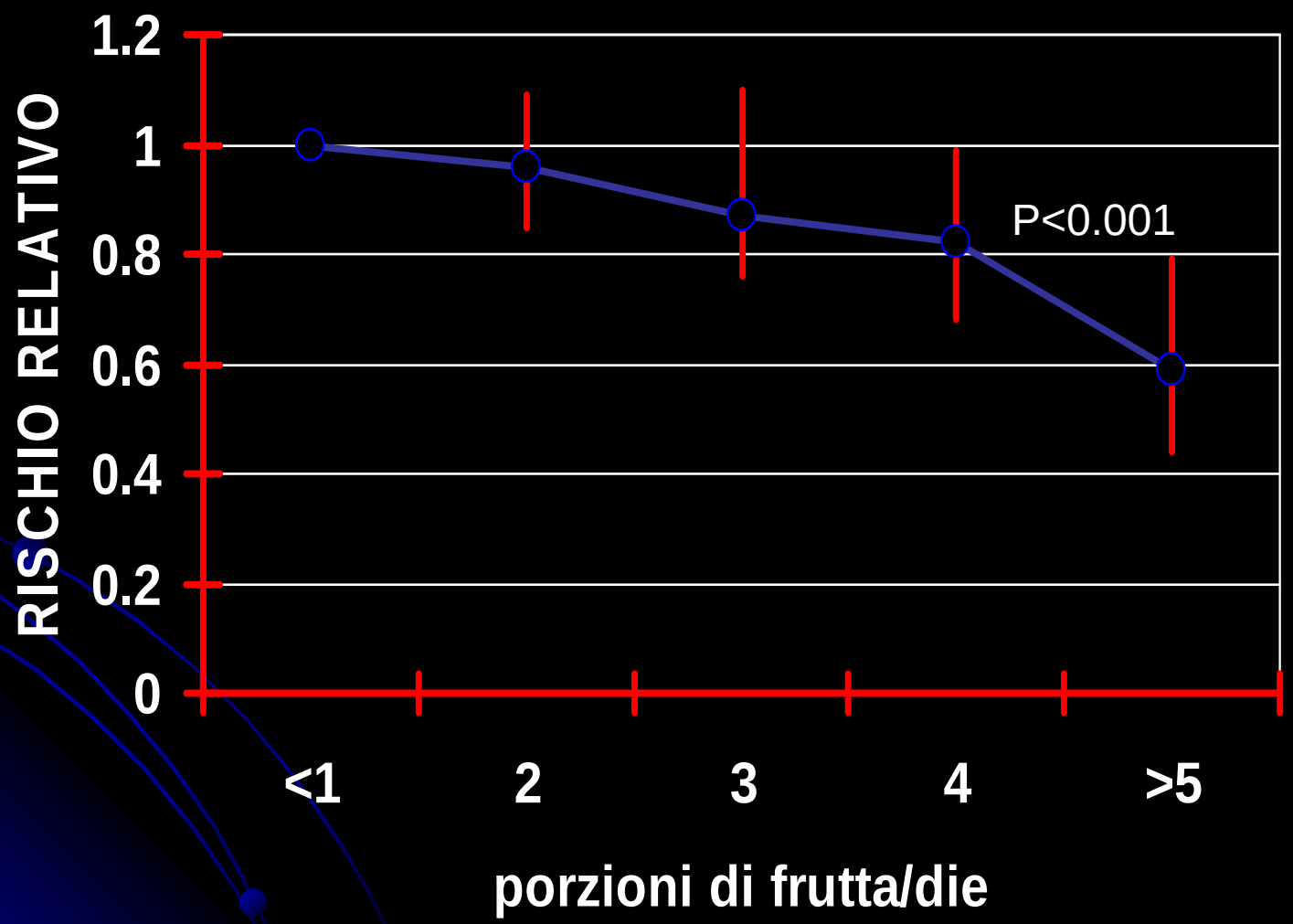
- 478000 donne
- Arruolate tra 1992→1998
- Follow-up medio 4.8 aa
- 1329 CRC
- Dopo 10 aa, rischio di CRC per paz di 50 aa
  - 1.71 per la classe a maggior consumo di carne
  - 1.28% per quelli a minor consumo di carne

CONSUMO DI CARNE E CRC



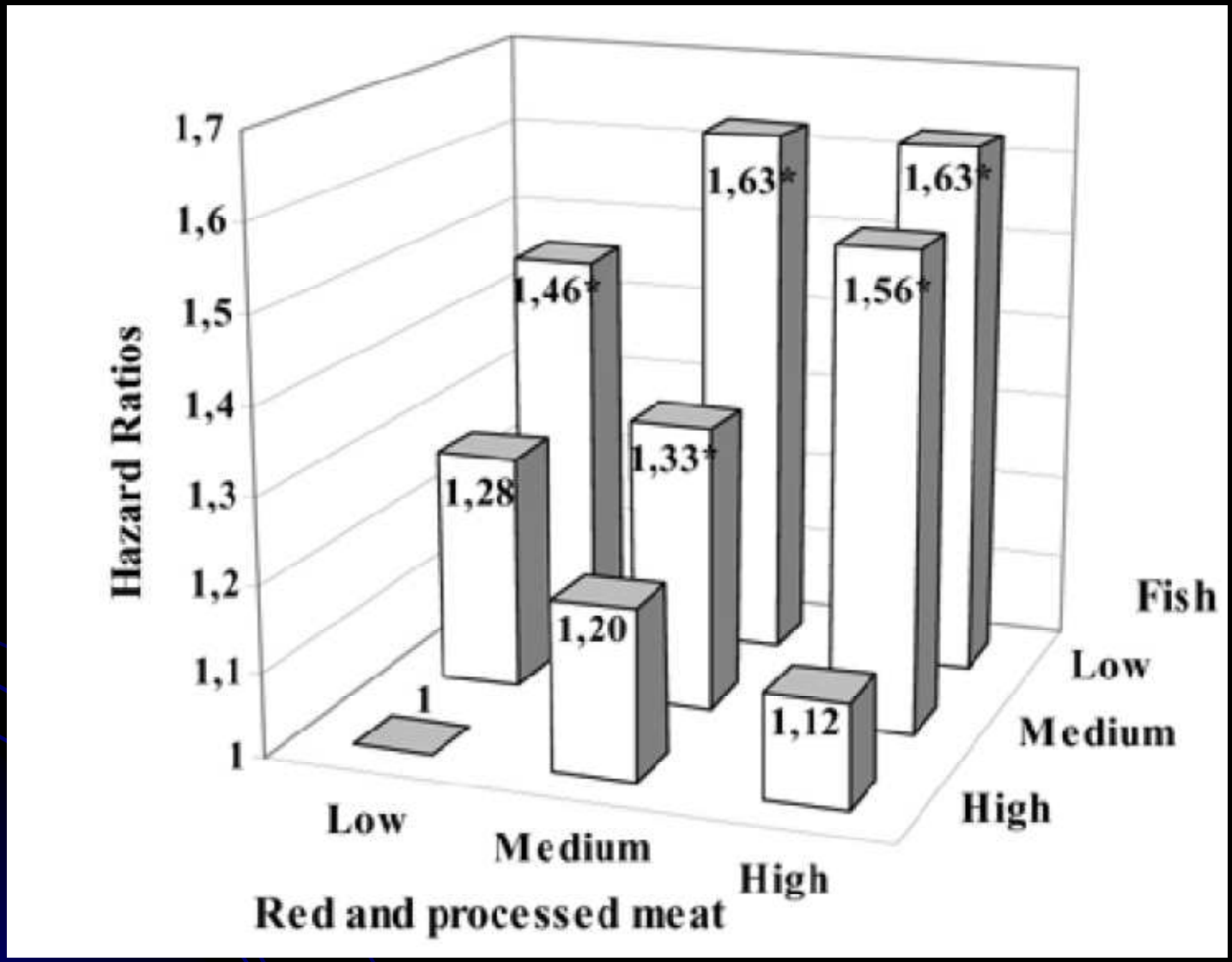
Fruit and Vegetable Consumption and Colorectal Adenomas in the Nurses' Health Study

Karin B. Michels,[1,2,3] Edward Giovannucci,[2,3,4] Andrew T. Chan,[2,5] Rohit Singhania,[3,7] Charles S. Fuchs,[2,6] and Walter C. Willett[2,3,4]



Cancer Res 2006; 66: (7).3942

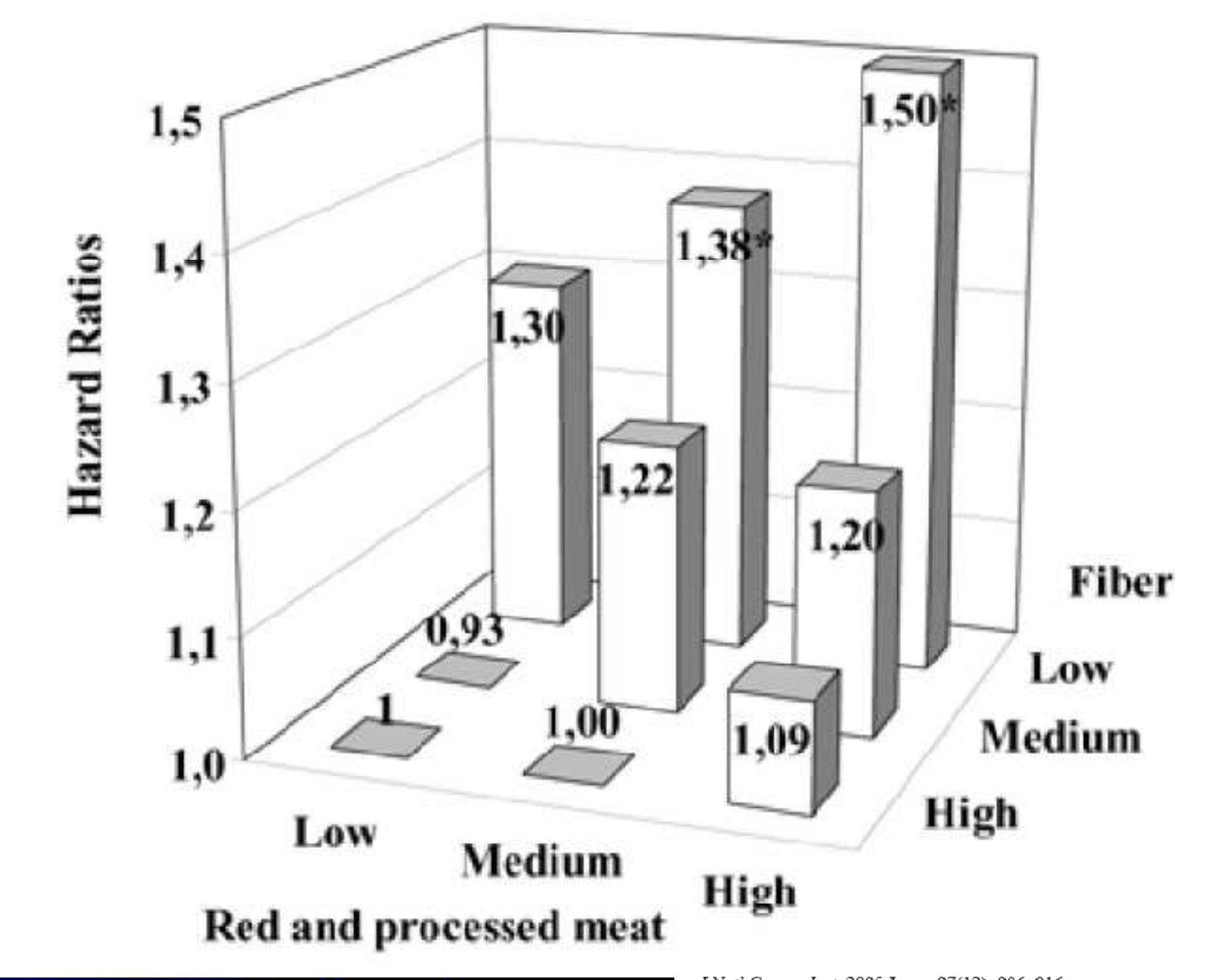
Carne, pesce e CRC



J Natl Cancer Inst. 2005 June ; 97(12): 906–915.

Meat, fish, and colorectal cancer risk: the European Prospective Investigation into cancer and nutrition

CARNE, FIBRE E CRC



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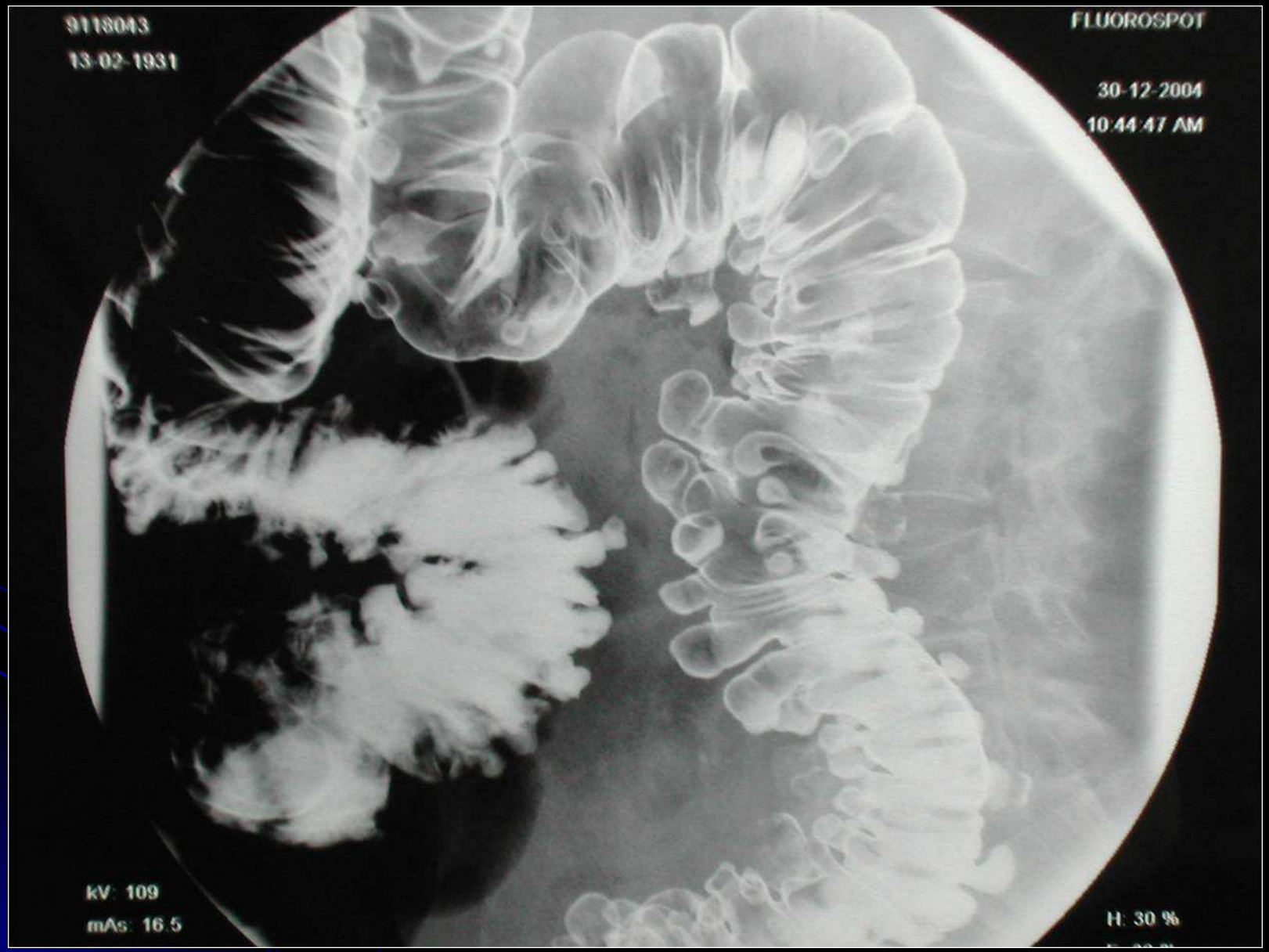
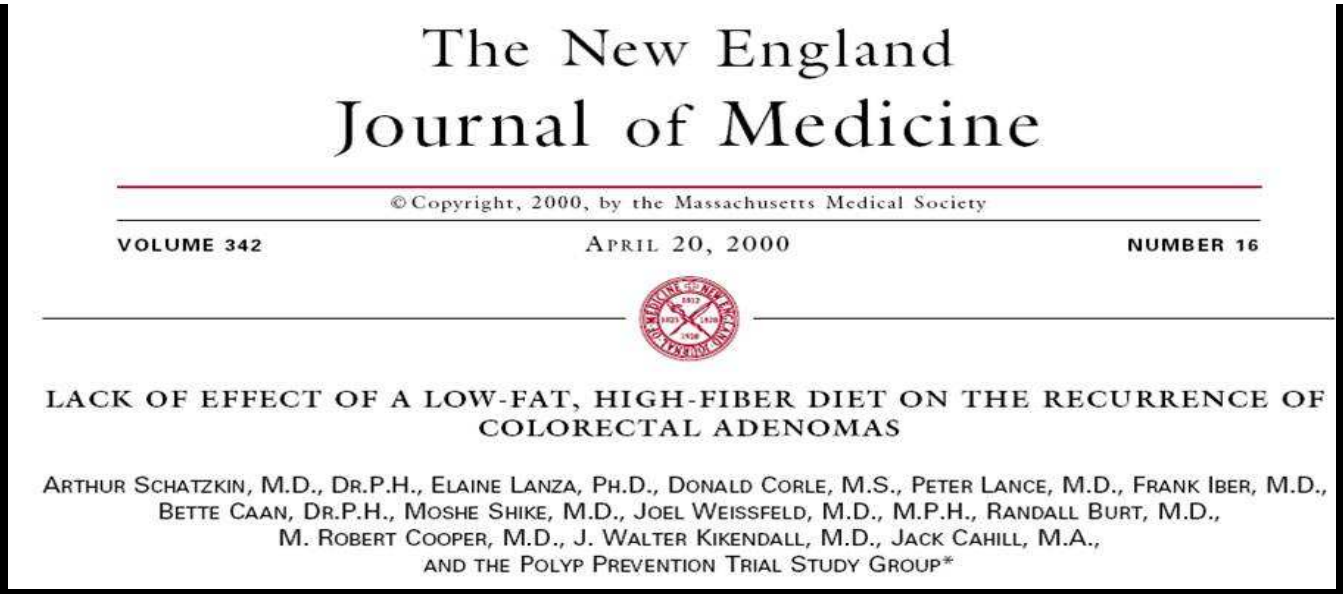
Meat, fish, and colorectal cancer risk: the European Prospective Investigation into cancer and nutrition


9118043
13-02-1931
FLUOROSPOT
30-12-2004
10:44:47 AM
kV: 109
mAs: 16.5
H: 30 %

Studi intervenzionali

- Modificando la dieta, minor rischio di K?
- Difficile da ottenere e monitorizzare
- Lunghi e costosi
- ➔ meglio se si valutano
  - Popolazioni a rischio elevato
  - Targets surrogati



The New England
Journal of Medicine

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LACK OF EFFECT OF A LOW-FAT, HIGH-FIBER DIET ON THE RECURRENCE OF COLORECTAL ADENOMAS

ARTHUR SCHATZKIN, M.D., DR.P.H., ELAINE LANZA, PH.D., DONALD CORLE, M.S., PETER LANCE, M.D., FRANK IBER, M.D., BETTE CAAN, DR.P.H., MOSHE SHIKE, M.D., JOEL WEISSFELD, M.D., M.P.H., RANDALL BURT, M.D., M. ROBERT COOPER, M.D., J. WALTER KIKENDALL, M.D., JACK CAHILL, M.A., AND THE POLYP PREVENTION TRIAL STUDY GROUP*

- Pazienti con polipectomia
- 947 controlli (consigli generici), 958 trattati
  - riduzione dei grassi
  - Aumento delle fibre (18 g/1000 Cal)
  - Aumento frutta e vegetali,
- Recidiva di adenomi
  - Controlli 39.5%, trattati 39.7%

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LACK OF EFFECT OF A HIGH-FIBER CEREAL SUPPLEMENT ON THE RECURRENCE OF COLORECTAL ADENOMAS

DAVID S. ALBERTS, M.D., MARÍA ELENA MARTÍNEZ, PH.D., DENISE J. ROE, DR.P.H., JOSÉ M. GUILLÉN-RODRÍGUEZ, M.S., JAMES R. MARSHALL, PH.D., J. BARBARA VAN LEEUWEN, M.A., MARY E. REID, PH.D., CHERYL RITENBAUGH, PH.D., PERLA A. VARGAS, PH.D., A.B. BHATTACHARYYA, M.D., DAVID L. EARNEST, M.D., RICHARD E. SAMPLINER, M.D., AND THE PHOENIX COLON CANCER PREVENTION PHYSICIANS' NETWORK*

- 1429 paz con polipectomia
- Aggiunta di crusca:
  - Alte dosi, HD: 13.5 g/die
  - Basse dosi, LD: 2 g/die
- Colonscopia a 3 aa
- Ricaduta: HD 47.0%, LD 51.2%

Gastrointestinal cancers in Europe

M. R. B. KEIGHLEY
Department of GI Medicine/Surgery, Queen Elizabeth Hospital Medical Centre, Birmingham, UK

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Table 11. UEGF Nutrition Decalogue

Food and health

- Aim to eat at least five portions of fruits and vegetables daily.
- Look for local, seasonal and fresh or frozen vegetables.
- Eat plenty of fibre-rich food and whole grains and control your intake of refined sugars and low fibre products.
- Moderate the intake of animal fat (i.e. dairy fat and fatty meat), by favouring low fat dairy products and by removing the visible fat from meat and the skin from chicken.
- Healthy cooking means low amounts of fat: any added fat used during cooking should preferably be seed oil or olive oil.
- Remember that fish, beans and lentils are suitable alternatives to meat. Moreover, fish oil is also considered beneficial for the prevention of some cancers (colorectal cancer in particular) and cardiovascular diseases.
- Avoid the excess of energy intake, regardless of the specific food-source calories.
- Avoid becoming overweight and keep your body weight under control (consult body mass index).
- Maintain a high level of physical exercise: at least 30 min per day of more than moderate activity is suggested (but the type of activity can change as you become older).
- Drink at least 1 L of water and, if you drink alcohol, have no more than two glasses of wine or beer per day and, possibly, avoid liquors.
- Enjoy your food and do not smoke!

From Giacosa A. Nutritional Decalogue 2003.

CONCLUSIONI: VA DOVE TI PORTA IL CUORE!