SIGG / SIOMMMS - Questione di fragilità

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Gruppo Young Epidemiologists SIGG (YES)

SIOMMMS Società Italiana dell'Osteoporosi del Metabolismo Minerale e delle Malattie dello Scheletro

Disclosures

- UCB Pharma S.p.A.

La paziente viene ricoverata presso **l'U.O.** di **Geriatria** con la seguente diagnosi: «Delirium ipocinetico e sindrome da ipomobilità in paziente anziana obesa con iniziale decadimento cognitivo con difficoltà di gestione domiciliare, insufficienza renale acuta prerenale verosimilmente iatrogena, riscontro di frattura vertebrale da fragilità in caduta accidentale in paziente con instabilità posturale e dolore cronico.».

ANZIANO FRAGILE!!!

Frailty Consensus: A Call to Action

John E. Morley MB, BCh [a,*], Bruno Vellas MD [b,c], G. Abellan van Kan MD [b,c], Stefan D. Anker MD, PhD [d,e], Juergen M. Bauer MD, PhD [f], Roberto Bernabei MD [g], Matteo Cesari MD, PhD [b,c], W.C. Chumlea PhD [h], Wolfram Doehner MD, PhD [d,i], Jonathan Evans MD [j], Linda P. Fried MD, MPH [k], Jack M. Guralnik MD, PhD [l], Paul R. Katz MD, CMD [m], Theodore K. Malmstrom PhD [a,n], Roger J. McCarter PhD [o], Luis M. Gutierrez Robledo MD, PhD [p], Ken Rockwood MD [q], Stephan von Haehling MD, PhD [r], Maurits F. Vandewoude MD, PhD [s], Jeremy Walston MD [t]

Frailty is a condition in which the individual is in a vulnerable state at increased risk of adverse health outcomes and/or dying when exposed to a stressor.[1] The European Union has placed specific importance on defining frailty, as frail persons are high users of community resources, hospitalization, and nursing homes. It is assumed that early intervention with frail persons will improve quality of life and reduce costs of care.[2,3]

Frailty is either physical or psychological or a combination of the 2 components, and is a dynamic condition that can improve or worsen over time. Two approaches to defining physical frailty have become popular. The deficit model consists of adding together an individual's number of impairments and conditions to create a Frailty Index.[4] The second model originally defined a specific physical phenotype consisting of a constellation of 5 possible components (weight loss, exhaustion, weakness, slowness, and reduced physical activity), which marked an underlying physiologic state of multisystem and energy dysregulation.[5] Both of these definitions are currently used to

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Geriatricians: The Super Specialists

John E. Morley, MB, BCh

Table 1. The Modern Giants of Geriatrics

1. Frailty
2. Sarcopenia
3. Anorexia of aging
4. Mild cognitive impairment
5. Delirium
6. Falls
7. Depression
8. Dementia
9. Polypharmacy
10. Fatigue

JAGS 2017

DIFFERENTE APPROCCIO AL PAZIENTE ADULTO ED ANZIANO

ADULTO	ANZIANO
MALATTIA	POLIPATOLOGIA
DIAGNOSI	VALUTAZIONE MULTIDIMENSIONALE
TERAPIA	POLIFARMACOTERAPIA ASSISTENZA
GUARIGIONE	GUARIGIONE PROCESSI ACUTI - STABILIZZAZIONE PROCESSI CRONICI- PREVENZIONE/CONTENZIONE NON AUTOSUFFICIENZA

courtesy of Basile G.

VMD (Valutazione Multidimensionale Geriatrica)

Processo diagnostico **multidisciplinare** e **multidimensionale** diretto ad identificare i bisogni, pianificare la cura e migliorare i risultati nell'anziano fragile.

- Salute fisica
- Capacità funzionale
- Salute psicologica e cognitiva
- Parametri socio-ambientali

La VMD utilizza una vasta gamma di test, misurazioni e scale di valutazione standardizzati e validati a livello internazionale.

VMD (Valutazione Multidimensionale Geriatrica)

Salute fisica:

- Anamnesi clinica e socio-ambientale
- Esame obiettivo nell'anziano
- **CCI (Charlson Comorbity Index):5 points**

Salute cognitiva e mentale:

- **MMSE (Mini-Mental State Examination) 23.1/30**

Stato dell'umore e salute psichica:

- **Scala Geriatrica di Depressione (GDS – 3/5)** e la Scala di Depressione di Hamilton

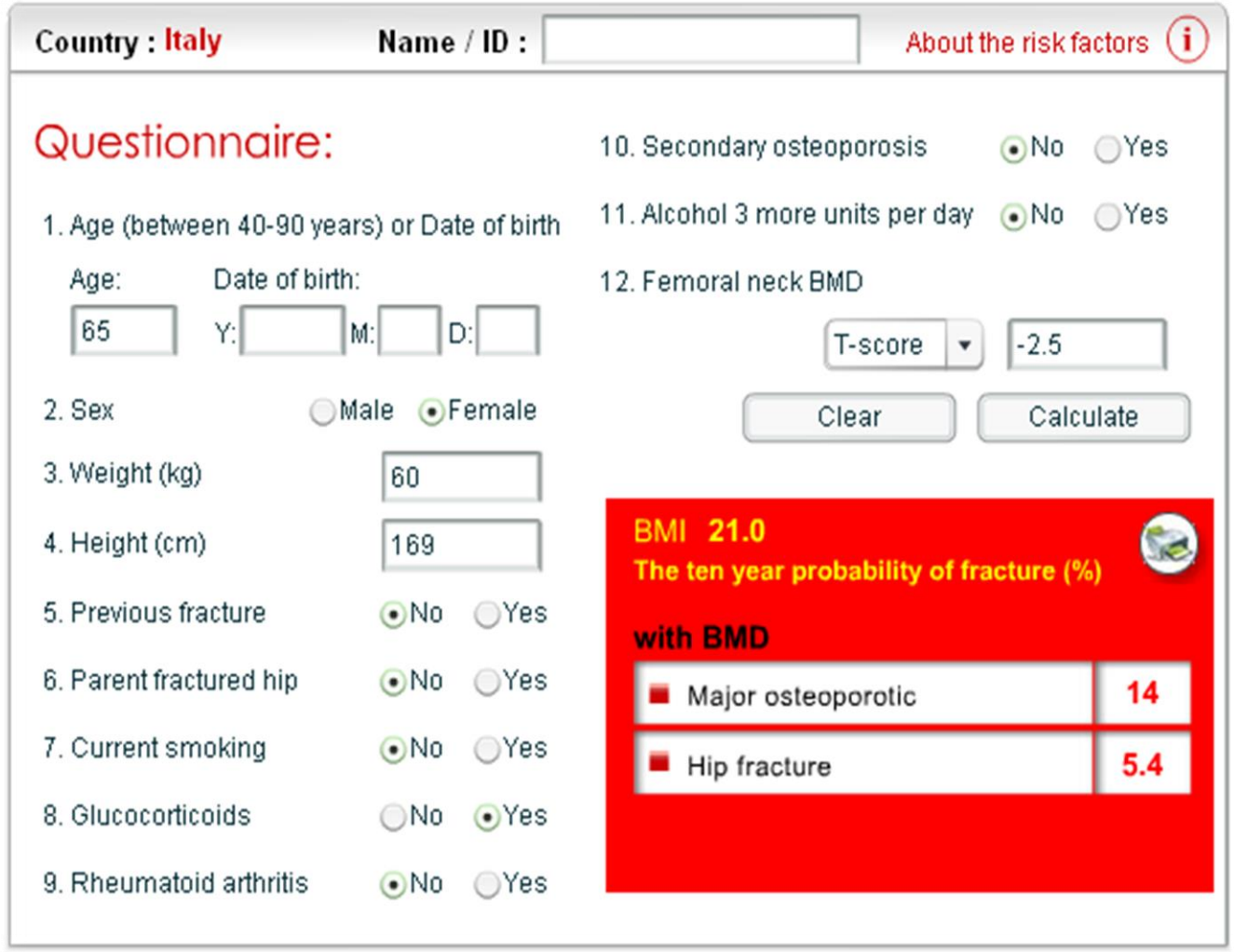
Stato funzionale:

- **ADL (5/6) ed IADL (4/8)**

Situazione socio-ambientale:

- Fattori che comprendono la rete di interazione sociale, la disponibilità di risorse sociali e di supporto, necessità di sicurezza e convenienza ambientale del singolo, risorse economiche del paziente

Indaghereste il rischio di frattura di questa paziente?



FRAX

Hip FRAX: 21%
Major FRAX: 38%

DeFRA

Review

Validation and further development of the WHO 10-year fracture risk assessment tool in Italian postmenopausal women: Project rationale and description

S. Adami[1], G. Bianchi[2], M.L. Brandi[3], O. Di Munno[4], B. Frediani[5], D. Gatti[1], S. Giannini[6], G. Girasole[2], G. Minisola[7], S. Minisola[8], R. Nuti[9], M. Pedrazzoni[10], M. Rossini[1], M. Varenna[11]

OBIETTIVO PRINCIPALE

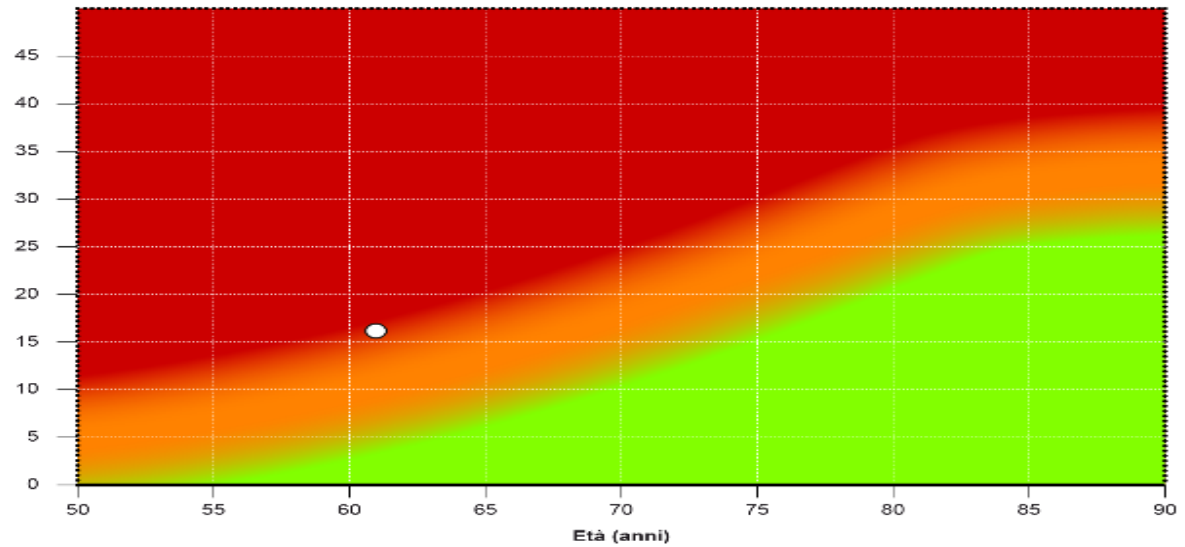
definire meglio il rischio assoluto di frattura introducendo nell'algoritmo

- variabili semiquantitative (fumo, corticosteroidi etc)
- numero e siti di precedenti fratture da fragilità
- altre malattie potenzialmente osteopenizzanti
- BMD sia del colonna vertebrale o del femore

DEFRA©

L'ALGORITMO PER LA STIMA DEL RISCHIO DI FRATTURA

Carta del rischio



Rischio di fratture maggiori a 10 anni: 16%

LEGENDA:
- ○ valore attuale
- ✕ valore per terapia prescritta correttamente assunta (*)
- ● valore visite precedenti

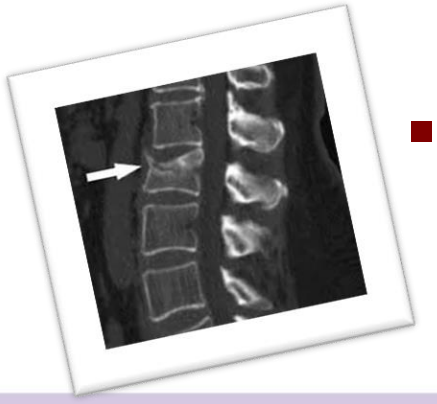
NOTE: (*) Il rischio di fratture maggiori diminuisce rispetto a quanto riportato nei pazienti in trattamento farmacologico per valori variabili.

DATA VISITA:	26/05/2015 12:39
PAZIENTE:	BXXAXX
ETÀ:	61
PESO:	55 Kg
ALTEZZA:	163 cm
FUMO:	Si (<10)
CORTISONICI:	>2.5<5mg
ALCOOL:	No
STORIA FAMILIARE:	Si
PREGRESSE FRATTURE:	No
PREGRESSE FRATTURE NON TRAUMATICHE:	Si (1)
ARTRITE REUMATOIDE E ALTRE CONNETTIVITI:	No
BMD:	Femore collo
TSCORE:	-2,80
TSCORE COLONNA:	-2,90
SCTX:	n.d.

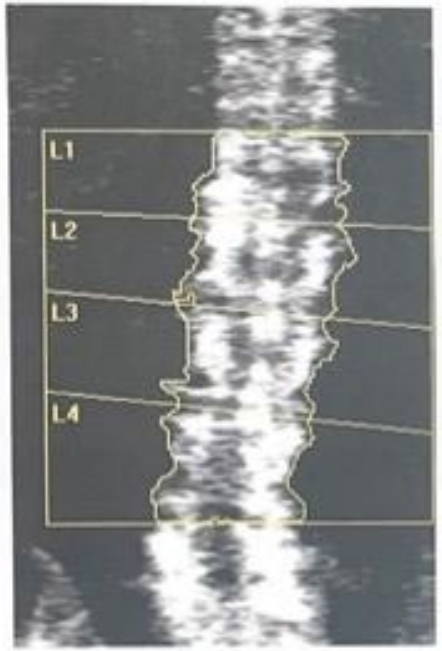
SCARICA STAMPA

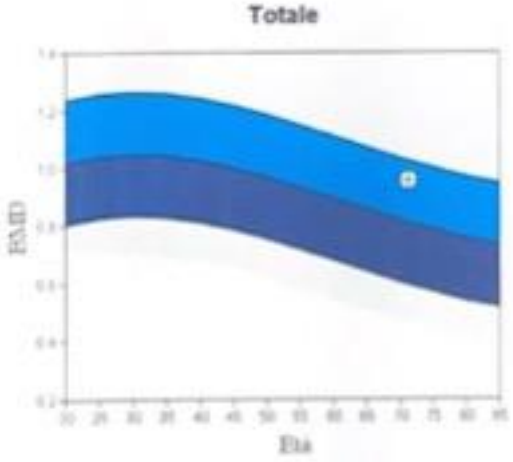
DIAGNOSI DI OSTEOPOROSI

- **Valutazione clinica** ***(identificazione dei soggetti a rischio)***
- **Misurazione della BMD** ***(DXA gold standard)***
- **Esecuzione di esami radiologici** ***(RX, morfometria vertebrale)***
- **Esecuzione di indagini di laboratorio**



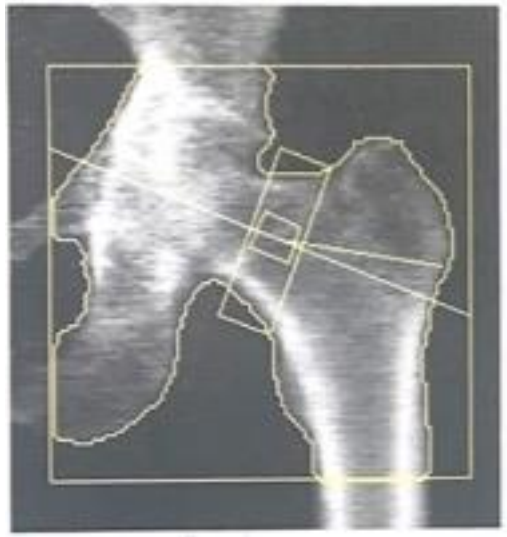
Fareste una densitometria ossea?

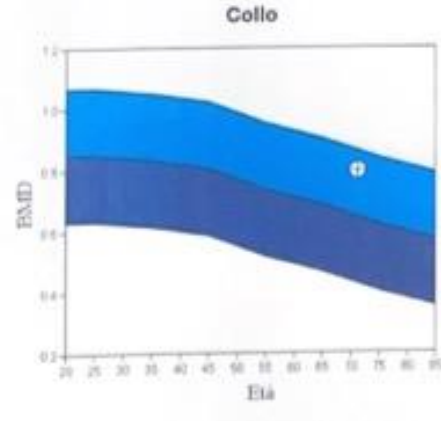




Riepilogo risultati DXA:

Regione	Area (cm^2)	BMC (g)	BMD (g/cm^2)	T - score	Z - score
L1	11.44	10.26	0.896	-0.9	1.1
L2	12.77	12.09	0.946	-0.7	1.4
L3	13.11	12.88	0.982	-0.9	1.3
L4	14.04	13.95	0.993	-0.6	1.7
Totale	**51.37**	**49.17**	**0.957**	**-0.8**	**1.4**

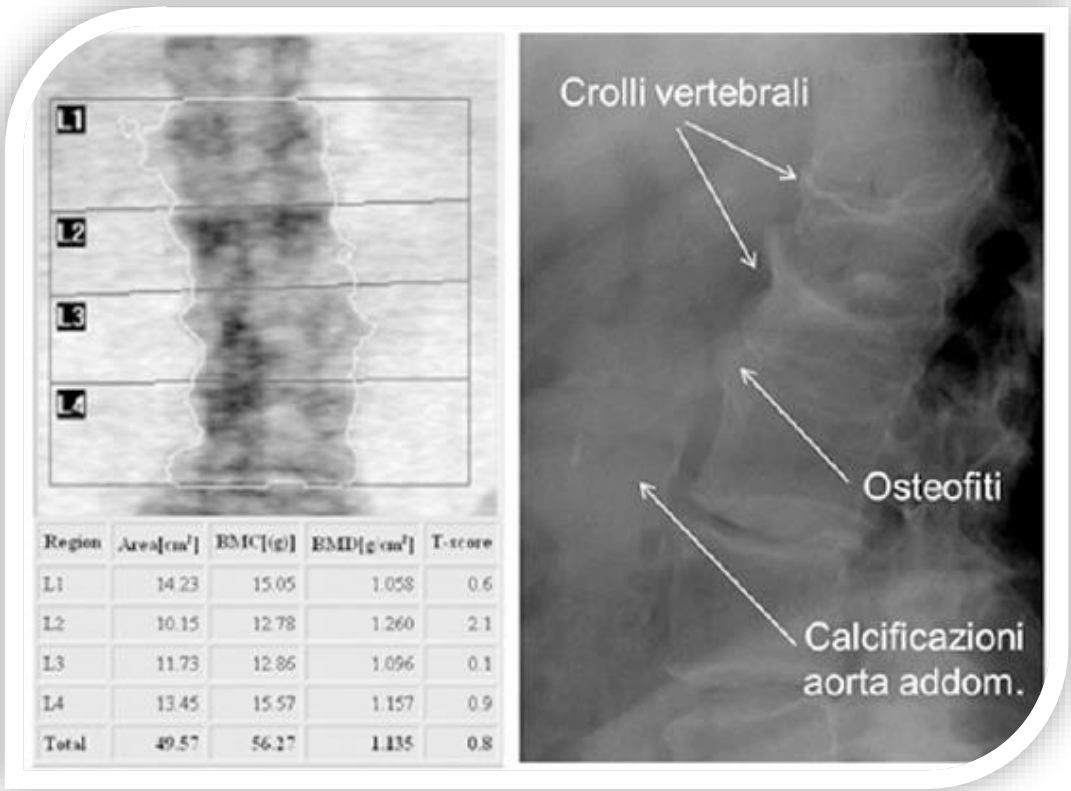




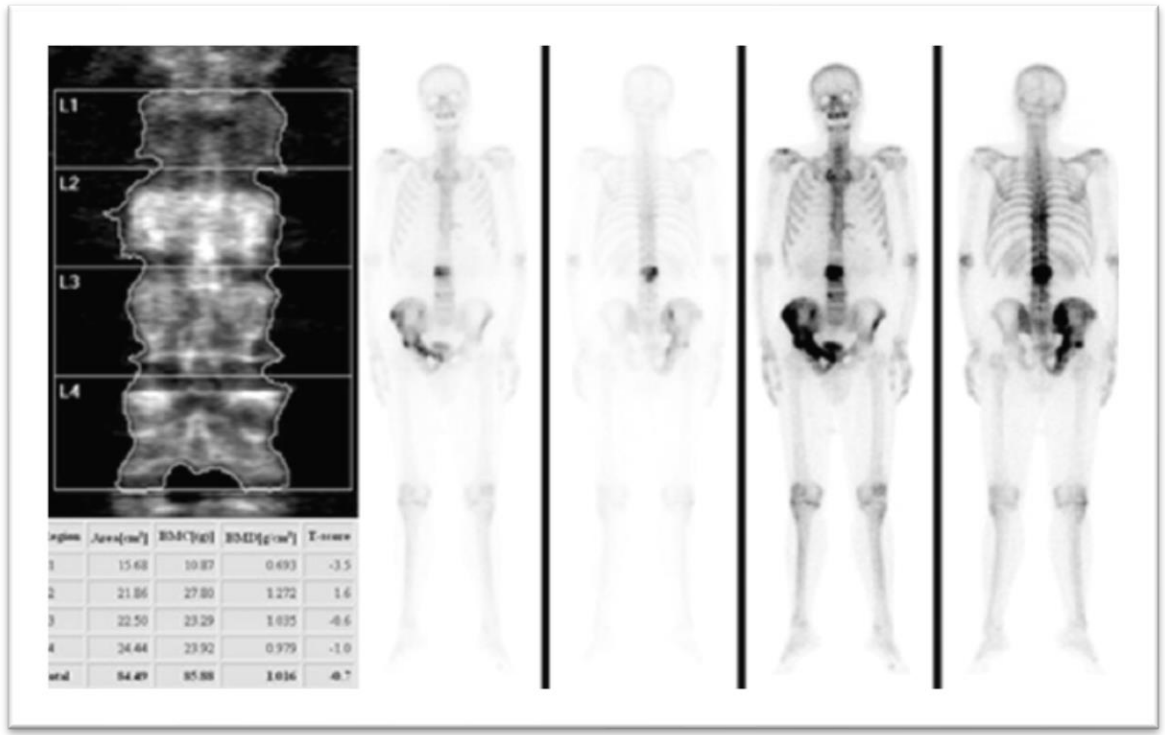
Riepilogo risultati DXA:

Regione	Area (cm^2)	BMC (g)	BMD (g/cm^2)	T - score	Z - score
Collo	**5.24**	**4.17**	**0.795**	**-0.5**	**1.4**
Troc	9.72	6.77	0.697	-0.1	1.3
Inter	19.72	23.90	1.212	0.7	2.0
Totale	34.69	34.84	1.004	0.5	2.1
di Ward	1.13	0.70	0.622	-1.0	1.7

Le «trappole» della DEXA in cui non cadere



Region	Area[cm²]	BMC[g]	BMD[g/cm²]	T-score
L1	14.23	15.05	1.058	0.6
L2	10.15	12.78	1.260	2.1
L3	11.73	12.86	1.096	0.1
L4	13.45	15.57	1.157	0.9
Total	49.57	56.27	1.135	0.8



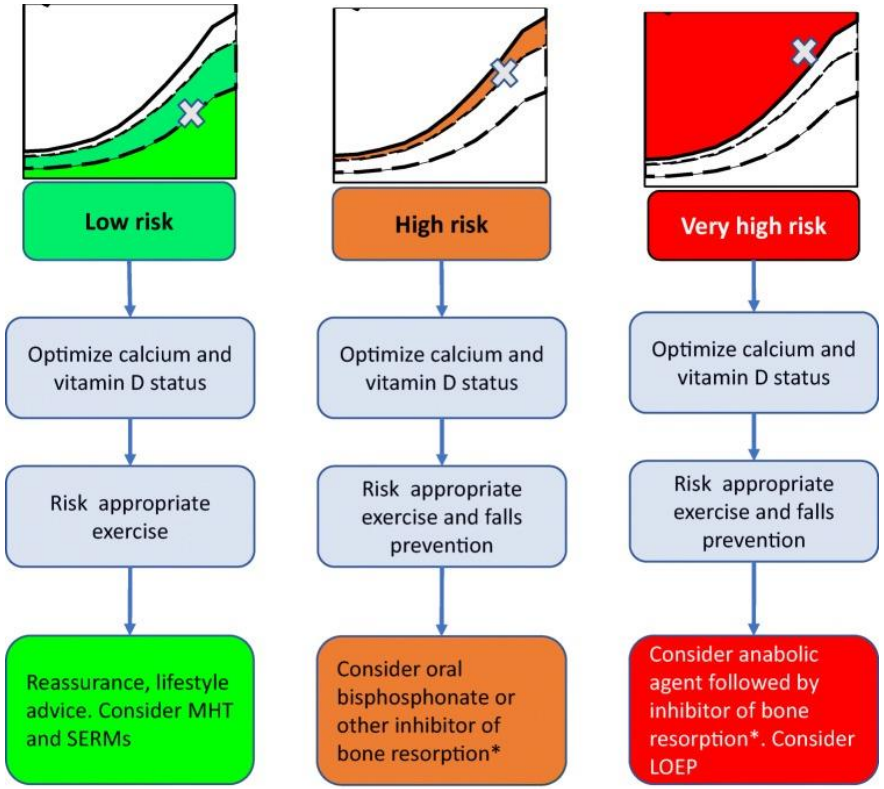
De Vincentis S. et al. societaitalianadiendocrinologia.it, 10/2020

Comments on Kanis et al.: Algorithm for the management of patients at low, high, and very high risk of osteoporotic fractures

G. Adami [1] · M. Rossini [1] · A. Fassio [1] · O. Viapiana [1] · D. Gatti [1]

In summary, Kanis and colleagues recognize three new pivotal points when dealing with osteoporosis: (1) FRAX should be arithmetically integrated with novel risk factors; (2) the identification of three risk categories (i.e., low, high, and very high risk); (3) bone anabolics should be considered in all patients at very high risk of fracture.

A similar treatment algorithm has been applied in Italy since 2015 when the Nota 79 has been developed by Italian Agency for Drugs (AIFA). The Nota 79 regulates the treat-



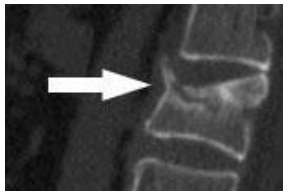
ELSEVIER

Bone Vol. 24, No. 3
March 1999:261–264

Spatial Relationships Between Prevalent and Incident Spine Fractures

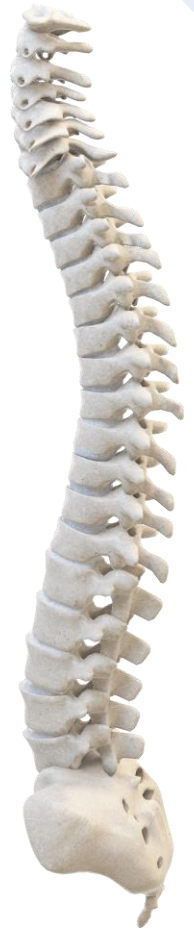
J. W. DAVIS,[1] J. S. GROVE,[2] R. D. WASNICH,[1] and P. D. ROSS[3]

[1] *Hawaii Osteoporosis Center, Honolulu, HI, USA*
[2] *Department of Statistics, School of Public Health, University of Hawaii, Honolulu, HI, USA*
[3] *Merck & Co., Rahway, NJ, USA*



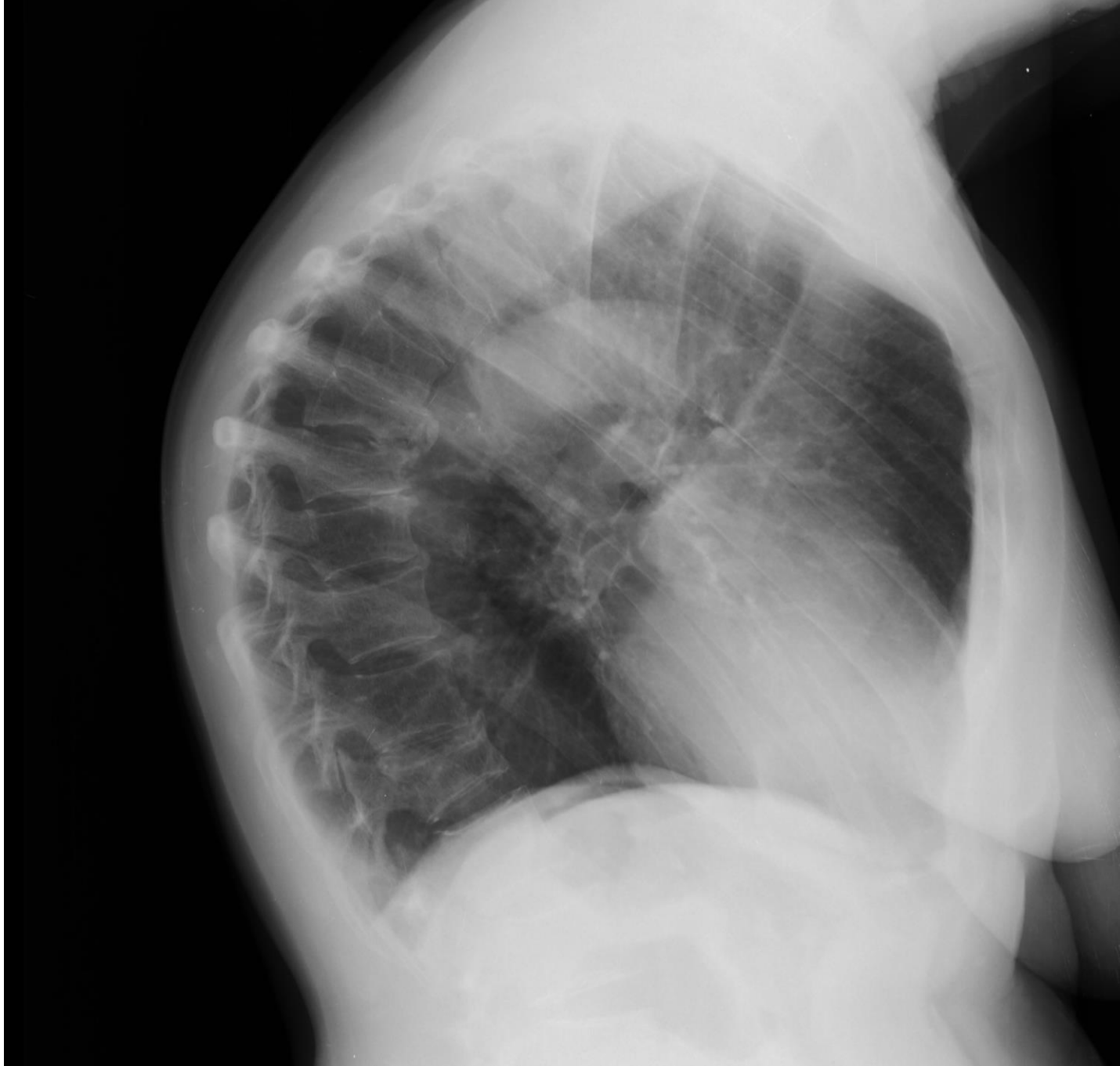
Women with prevalent fractures have an increased risk of developing additional, incident fractures. This article examines the relation between the location of prevalent fractures within the spine and the risk of subsequent vertebral fractures. The subjects were 721 Japanese-American women of mean age 69.5 ± 5.3 (SD) years. For the analyses, the spine was categorized into three regions: an upper region, vertebrae T3–11; a middle region, vertebrae T-12 and L-1; and a lower region, vertebrae L2–5. Initial analyses were limited to women with, at most, one prevalent fracture. Compared to women without fracture, women with a prevalent fracture had odds ratios of 2–5 for developing an incident fracture outside the prevalent region. Subsequent analyses included women with multiple prevalent fractures. Women having two or three prevalent fractures had odds ratios of 7–9 for developing an incident fracture outside the prevalent region. The results suggest that the increased fracture risk of women with prevalent fractures extends beyond nearby vertebrae, and can affect vertebrae both above and below the prevalent fracture. (Bone 24:261–264; 1999)

Fareste ulteriori indagini strumentali?



RX rachide dorsale

«… **crollo di alcuni metameri centro-dorsali** con accentuazione della cifosi. Accentuazione della trama peribroncovasale. Ombra cardiovasale di dimensioni nella norma...»



The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812 JULY 28, 2022 VOL. 387 NO. 4

Supplemental Vitamin D and Incident Fractures in Midlife and Older Adults

Meryl S. LeBoff, M.D., Sharon H. Chou, M.D., Kristin A. Ratliff, B.A., Nancy R. Cook, Sc.D., Bharti Khurana, M.D., Eunjung Kim, M.S., Peggy M. Cawthon, Ph.D., M.P.H., Douglas C. Bauer, M.D., Dennis Black, Ph.D., J. Chris Gallagher, M.D., I-Min Lee, M.B., B.S., Sc.D., Julie E. Buring, Sc.D., and JoAnn E. Manson, M.D., Dr.P.H.

In an ancillary study of the Vitamin D and Omega-3 Trial (**VITAL**), we tested whether supplemental vitamin D3 would result in a lower risk of fractures than placebo.

Vitamin D 3 supplementation did not result in a significantly lower risk of fractures than placebo

among generally healthy midlife and older adults who were not selected for vitamin D deficiency, low bone mass, or osteoporosis

Osteoporosis International (2022) 33:2049–2102
https://doi.org/10.1007/s00198-021-05900-y

CONSENSUS STATEMENT

Check for updates

The clinician's guide to prevention and treatment of osteoporosis

M. S. LeBoff[1] · S. L. Greenspan[2] · K. L. Insogna[3] · E. M. Lewiecki[4] · K. G. Saag[5] · A. J. Singer[6] · E. S. Siris[7]

Adults who are vitamin D deficient are typically treated with **50,000 units of vitamin D2 or vitamin D3 once a week** (or the equivalent **daily dose of 7000 units vitamin D2 or vitamin D3**)
for **5–8 weeks** to achieve a 25(OH)D blood level of approximately 30 ng/mL. This regimen should be followed by maintenance therapy of **1000 to 2000 units/day** or whatever dose is needed to maintain the **target serum level**

nutrients

MDPI

Review

Definition, Assessment, and Management of Vitamin D Inadequacy: Suggestions, Recommendations, and Warnings from the Italian Society for Osteoporosis, Mineral Metabolism and Bone Diseases (SIOMMMS)

Francesco Bertoldo [1], Luisella Cianferotti [2], Marco Di Monaco [3], Alberto Falchetti [4,*], Angelo Fassio [5], Davide Gatti [5], Luigi Gennari [6], Sandro Giannini [7], Giuseppe Girasole [8], Stefano Gonnelli [6], Nazzarena Malavolta [9], Salvatore Minisola [10], Mario Pedrazzoni [11], Domenico Rendina [12], Maurizio Rossini [5] and Iacopo Chiodini [13,14]

SIOMMMS Società Italiana dell'Osteoporosi del Metabolismo Minerale e delle Malattie dello Scheletro

Population/condition at risk of hypovitaminosis D

- Old people (≥75 years)
- Institutionalized subjects or conditions associated with inadequate solar exposure
- Obesity
- Pregnancy and breast-feeding
- Metabolic bone diseases and other skeletal disorders
- Vegan diet
- Anorexia nervosa
- Chronic renal failure
- Cancer (in particular breast, prostate, and colon)
- Type 2 diabetes mellitus
- Intestinal malabsorption and bariatric surgery
- Drugs that interfere with the absorption or hepatic metabolism of vitamin D (antiepileptics, glucocorticoids, antiviral AIDS, antifungal agents, cholestyramine)
- Cystic fibrosis

nutrients

MDPI

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Evidence levels supporting the suggestion and recommendation regarding the measurements of 25(OH)D levels in specific categories of subjects.

	Evidence Levels
It is suggested not to indiscriminately measure the levels of 25(OH)D in patients with conditions/pathologies at risk of hypovitaminosis D	⊕⊕
It is recommended the measurement of 25(OH)D levels only when it is deemed necessary for the clinical management of the patient (i.e., when osteomalacia is suspected)	⊕⊕

nutrients

MDPI

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In Subjects with Hypovitaminosis D, or Candidates for Bone Active Agents for Osteoporosis:	Evidence Levels
We suggest a dose of cholecalciferol supplementation between 800 IU/day and 2000 IU/day. There is no single, fixed dose for all subjects that needs to be supplemented.	⊕
We suggest a daily, weekly, monthly schedule based on the dose administered. In these settings, the maximum single daily dose to be administered should not exceed 100,000 IU. An adequate calcium intake (800–1000 mg/day) must always be ensured.	⊕
We recommend the use of an initial loading dose, followed by the maintenance dose in patients with symptomatic osteomalacia and/or serum 25(OH)D < 10 ng/mL, or in patients starting bone anti-resorptive therapy with intravenous bisphosphonates or denosumab with serum 25(OH)D < 20 ng/mL.	⊕⊕⊕
We recommend, as loading dose, cholecalciferol 3000–10,000 IU/day (average 5000 IU/day) for 1–2 months, or cholecalciferol in a single dose of 60,000 to 150,000 IU followed by the maintenance dose (2000 IU/day). Alternatively, we suggested calcifediol 20–40 mcg/day (4–8 gtt/day) for 20–30 days, before switching to maintenance dose *.	⊕⊕⊕

* With a limited recommendation for a faster normalization of serum levels of 25(OH)D only.

La paziente pertanto avvia supplementazione orale con:

- Calcio carbonato 500 mg bid
- **Colecalciferolo 10.000 UI al giorno per 30 giorni**

Fareste valutare la paziente da un

«**bone specialist**»?

YES

NO