

Congresso Macroregionale

● DESENZANO
DEL GARDA
23 MAGGIO



AME day

Disturbi della sessualità maschile: diagnosi e terapia

Dott. Mauro Schiesaro



Disturbi della sessualità



➤ **Disturbi del desiderio**

- ↙ Iperattività
- ↙ Ipoattività
- ↙ Avversione al sesso

➤ **Disturbi dell'erezione**

- ↙ Disfunzione Erettile
- ↙ Erezione prolungata (priapismo)
- ↙ Deformità del pene (congenita/acquisita)

➤ **Disturbi dell'eiaculazione**

- ↙ Eiaculazione precoce
- ↙ Eiaculazione ritardata
- ↙ Aneiaculazione
- ↙ Eiaculazione retrograda

➤ **Disturbi della fase orgasmica**

- ↙ Anorgasmia
- ↙ Orgasmo ritardato

➤ **Disturbi della sensibilità locale**

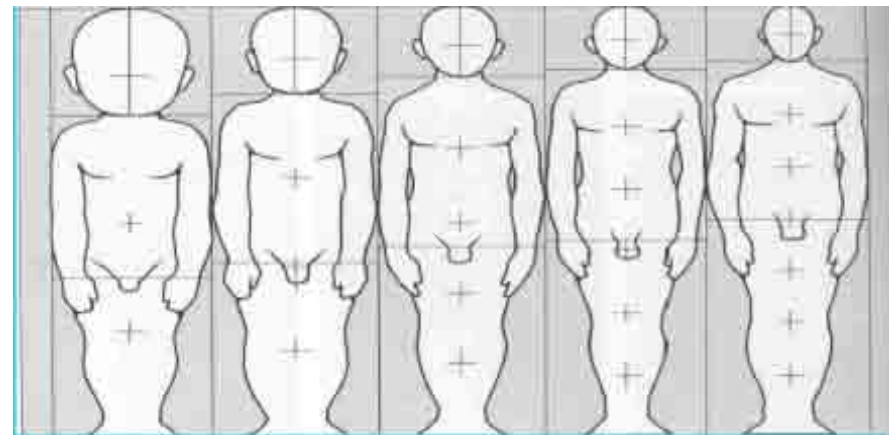
- ↙ Iposensibilità
- ↙ Ipersensibilità
- ↙ Dolori "sessuali"



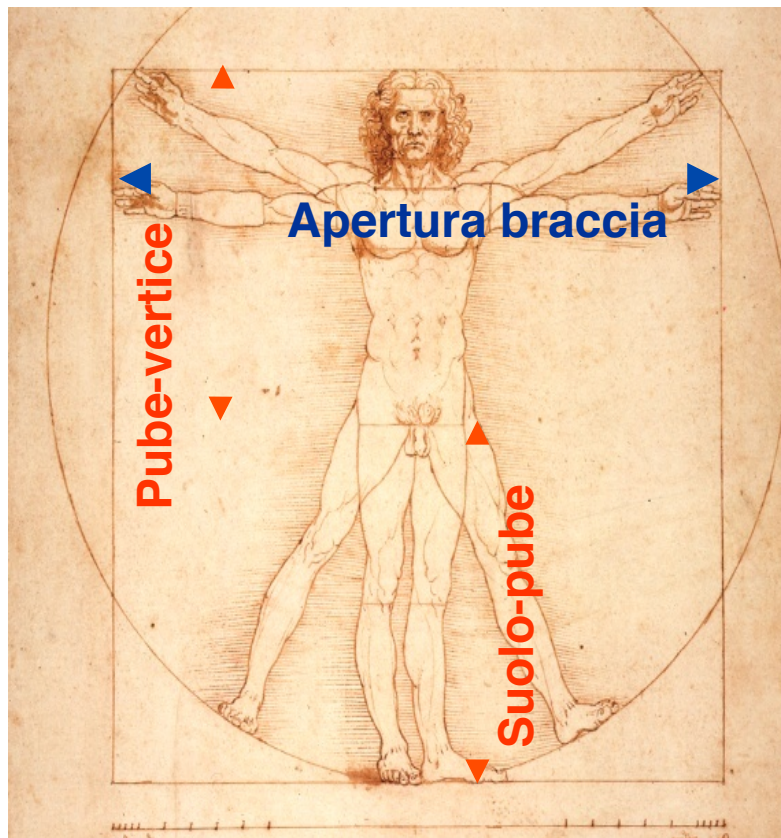
Sistema Endocrino



Androgeni condizionano l'accrescimento, le proporzioni corporee, i caratteri sessuali secondari, la distribuzione del grasso sottocutaneo e della massa muscolare



	<i>Livi, anno 1896</i>	<i>Costanzo anno 1948</i>	<i>Cappieri anno 1960</i>	<i>Grassivaro anno 1972</i>	<i>Istat, 1983</i>	<i>Istat, 1995</i>	<i>Istat, 2000</i>	Progetto Andrologico anni 2005-2010
Altezza	166,6	166,7	170	171,7	174,77	176,1	176,9	178.8±6.6
	<i>Loeb et al. anno 1881</i>	<i>Bondil et al. anno 1972</i>	<i>Ponchiotti et al., 2001 anno 1999</i>		<i>Cacciari et al., anno 2002</i>		Progetto Andrologico anni 2005-2010	
Peso	53,3	54,5	69,1		68,6		72.6±10.9	
BMI	20,1	20,3	20,4		22		22.7±3.0	
		<i>Kinsey, anno 1948</i>	<i>Ponchiotti et al., 2001 anno 1999</i>		Progetto Andrologico anni 2005-2010			
Lungh. Pene		9,7cm	9,0cm		8.9±1.4			
Circ. Pene		10,6cm	10,0cm		9.5±1.0			



	n (%)
BMI (kg/m²)	
< 18.5 (underweight)	79 (3.9)
18.5 - 24.99 (normal)	1606 (79.5)
25 - 29.99 (overweight)	286 (14.2)
30 - 34.99 (obese)	37 (1.8)
≥ 35 (extreme obese)	11 (0.5)
Waist (cm)	
< 102 (normal)	1930 (95.6)
≥ 102 (pathological)	89 (4.4)
Arm span – height (cm)	
≤ 3 (normal)	1292 (64.0)
> 3 (pathological)	727 (36.0)
Crown-to-pubis/pubis-to-floor	
> 0.92 (normal)	1116 (55.3)
≤ 0.92 (pathological)	903 (44.7)
Mean testicular volume (mL)	
> 12 (normal)	596 (76.8)
≤ 12 (pathological)	180 (23.2)



Evidence for decreasing quality of semen during past 50 years

Elisabeth Carlsen, Aleksander Giwercman, Niels Keiding, Niels E Skakkebak

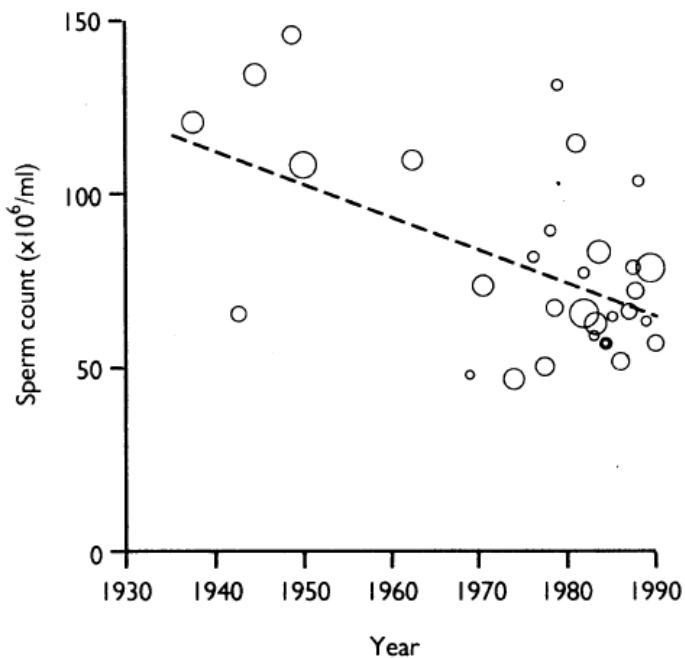


FIG 1—Linear regression of mean sperm density reported in 61 publications (represented by circles whose area is proportional to the logarithm of the number of subjects in study) each weighted according to number of subjects, 1938-90

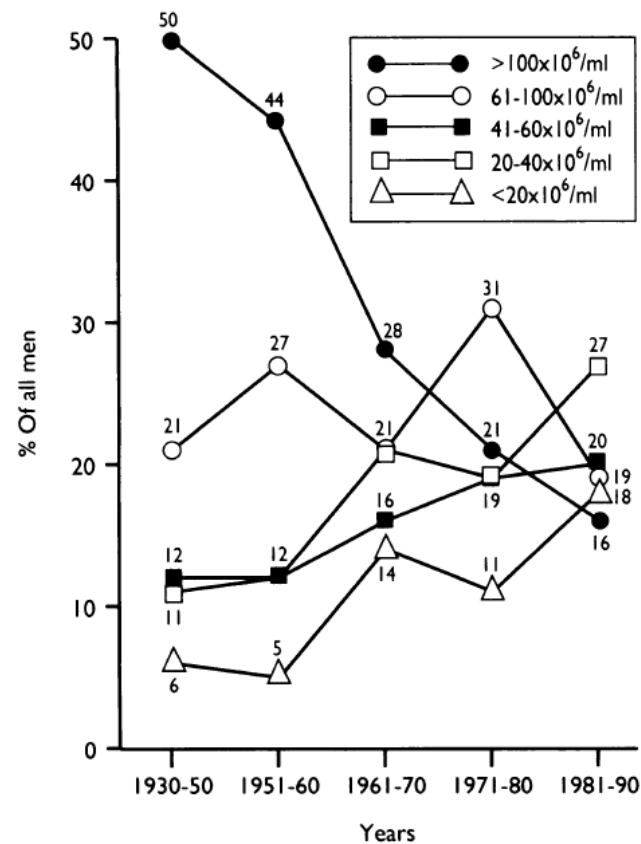
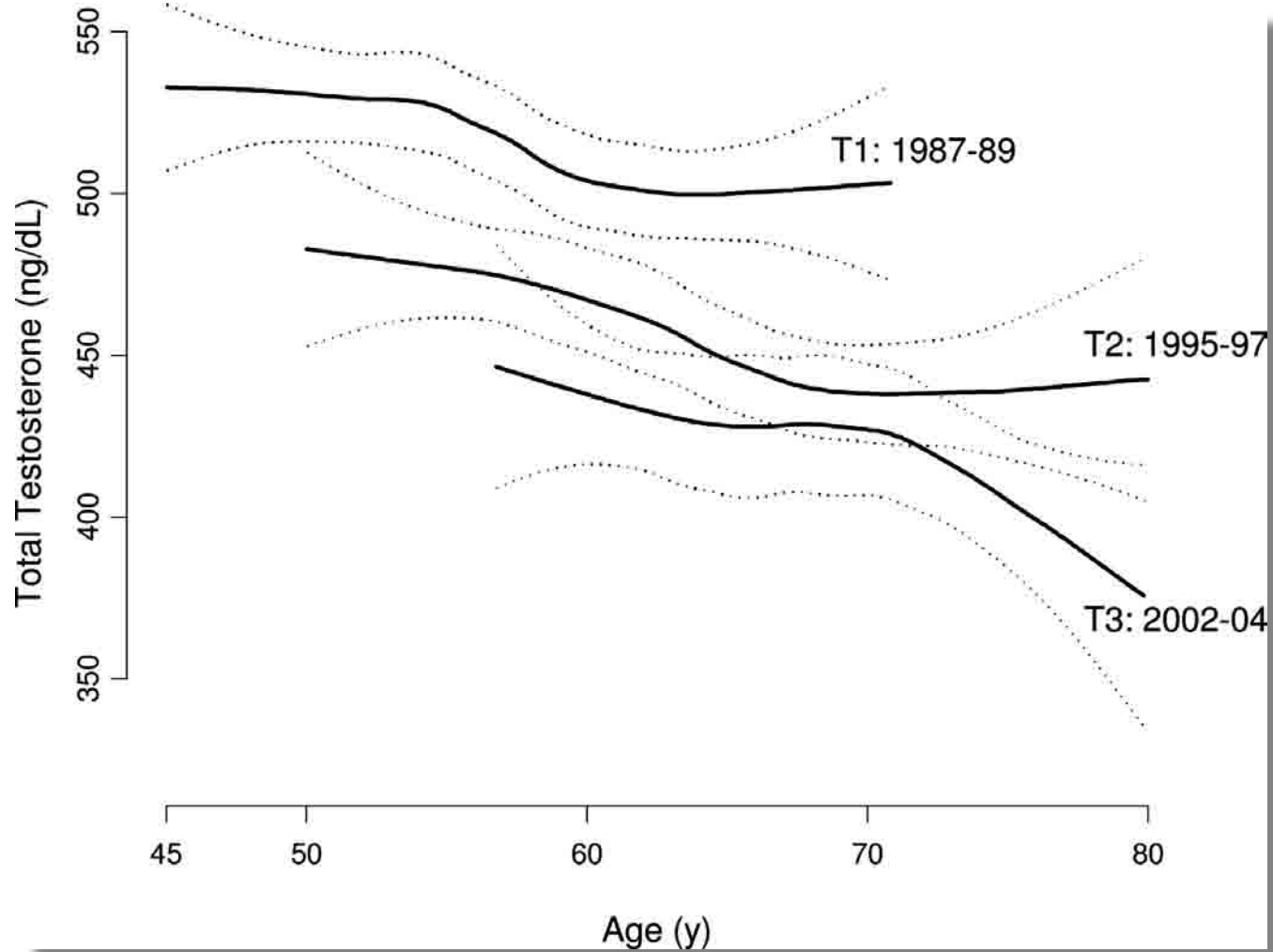


FIG 2—Number (percentage) of men with sperm densities in the different concentration bands: <20x10⁶/ml, 20-40x10⁶/ml, 41-60x10⁶/ml, 61-100x10⁶/ml, >100x10⁶/ml (data from 27 publications)



Testosterone





Falling sperm counts twenty years on: where are we now?

R John Aitken



Rather, testicular cancer does seem to be showing a genuine increase in incidence in the last 30 years in most industrialized countries in North America, Europe and Oceania.¹⁷ Notwithstanding significant differences in absolute incidence between countries, this increase is occurring at a rate that would be consistent with an environmental, rather than a genetic, cause. The inflection point for the recent rise in testicular cancer levels coincides with the end of World War II,



Disturbi della sessualità maschile: fattori di rischio



- Ipotrofia testicolare
- Criptorchidismo
- Genetica
- Tumori del testicolo
- Traumi testicolari
- Infezioni del tratto riproduttivo
- Malattie sistemiche ed endocrine
- ***Fattori ambientali e occupazionali (endocrine disruptors)***
- ***Stili di vita, abitudini voluttuarie***



Interferenti endocrini



- **Plasticizzanti**: bisfenolo A; ftalati (DBP, DEHP)
 - **Insetticidi, Fungicidi**: linuron, lindano, vinclozolina
MTX, Derivati del DDT, atrazina, dinitrobenze
 - **Diossine**: TCDD
 - **Policlorobifenili**
-
- Agiscono sia su spermatogenesi che su steroidogenesi
 - Effetti nocivi dipendono da epoca, durata dell'esposizione



Endocrine Disruptors



**Esposizione materna
Potenzialmente
irreversibile**

**Esposizione diretta
Potenzialmente reversibile**

**Proliferazione e Differenziazione cellule
germinali fetali**

Spermatogenesi

Proliferazione Sertoli

**Maturazione
Cell Sertoli**

Differenziazione Testicolare

Quiescenza

Testosterone

7

37

Periodo fetale

0-6 mesi

Infanzia

Pubertà

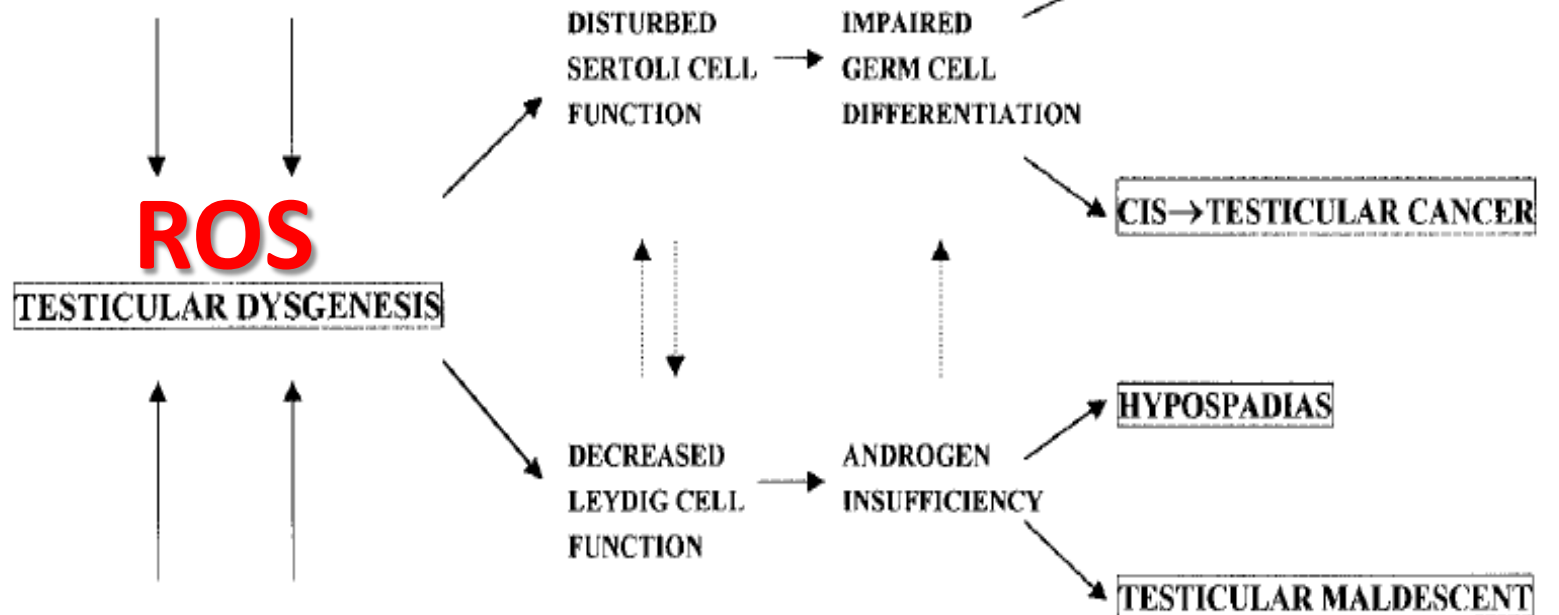
Età adulta



Testicular dysgenesis syndrome: an increasingly common developmental disorder with environmental aspects



*Environmental factors
incl. endocrine disruptors*



*Genetic defects
e.g. 45,X/46,XY, point mutations etc.*

Ipotesi Estrogenica

CORRIERE DELLA SERA / SALUTE

HOME **CORRIERE TV** ECONOMIA SPORT CULTURA SCUOLA SPETTACOLI **SALUTE** SCIENZE INNOVAZIONE TECH

IL RAPPORTO

Contrordine sul bisfenolo A «Nessun rischio per la salute»



1



46

Secondo un rapporto dell'Autorità europea per la sicurezza alimentare l'esposizione a BPA da fonti alimentari o di altro tipo è molto al di sotto dei livelli di sicurezza

salute John Dalli. L'accordo al tavolo dei 27, ricorda Bruxelles, è stato raggiunto dopo mesi di discussioni che hanno coinvolto i servizi della Commissione, l'Efsa, i rappresentanti degli Stati membri e quelli dell'industria.

PIÙ letti di SALUTE

OGGI

SETTIMANA

MESE

MUTANDA CLASSICA, PER
CHI, ORAMAÌ, NON HA
PIÙ MENTE DA DIRE!



BOXER, PER CHI
AMA LE COMODITÀ!



PERIZOMA, PER CHI
NON ACCETTA LA
REALTÀ!





Dieta



**Food intake and its relationship with semen quality:
a case-control study** Mendiola J Fertil Steril 2009

**Dietary fat and semen quality among
men attending a fertility clinic** Attaman JA Hum Reprod 2012

**The roles of omega-3 and omega-6 fatty acids in
idiopathic male infertility** Safarinejad RS As. J Androl. 2012

**The role of antioxidant therapy in the treatment of
male infertility** Agarwal A Hum. Fertil. 2010

Dieta ricca di **Omega 3 e 6** migliora parametri seminali

Dieta con **frutta, verdura, pesce** migliora motilità rispetto **dolci, pizza, carne**

Diete ricche di **grasso** alterano sia numero che qualità degli spermatozoi

Carnitina, Coenzima Q10, Vitamina C, Glutazione, Selenio migliorano la qualità dei spermatozoi e la «pregnancy rate».



Alcool



- Consumo eccessivo : Fattore di rischio per infertilità
- Blocco della secrezione di GnRH e della sua produzione da pre-pro-GnRH
- Azione diretta su LH
- Effetto negativo sulle cellule del Sertoli
- Dannoso sia consumo cronico che acuto
- Dose dipendenza : 40 gr/die alterano parametri seminali; 160 gr/die: OSCS



Fumo di Sigaretta



- Esatto meccanismo non conosciuto :
 - Ridotto apporto di ossigeno al testicolo
 - Stress ossidativo (Cadmio, Polonio, monossido di carbonio ecc.)
- Numero, motilità, morfologia, HOS, Vitalità, integrità della cromatina, CASA, Zn
- Effetti negativi reversibili dopo 3 mesi



Cannabis



Età	Consumatori
26-34 aa	20 %
35-49 aa	11 %
> 50 aa	5 %

THC inibisce GnRH e LH
Consequente riduzione di T
Ginecomastia, ridotta libido, DE, disturbi dell'eiaculazione

Blocco maturativo spermatozoi (meiosi e mitosi)
Oligozoospermia
Astenozoospermia
Inibizione della reazione acrosomiale

Danni reversibili dopo 3 mesi

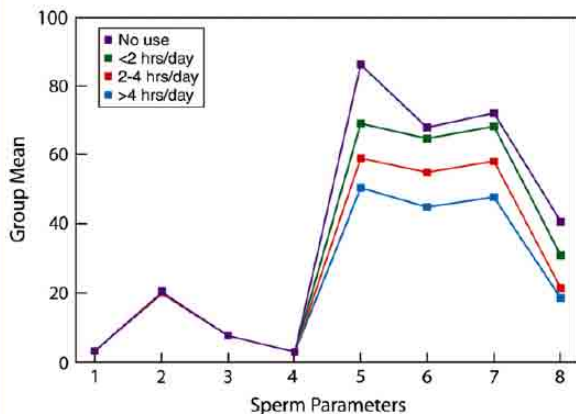


Telefoni Cellulari



FIGURE 1

Sperm parameter profile for cell phone use groups. The x-axis lists eight sperm parameters: 1 = volume; 2 = liquefaction time; 3 = pH; 4 = viscosity; 5 = sperm count; 6 = motility; 7 = viability; and 8 = percent normal morphology. The y-axis depicts the mean value of the corresponding sperm parameters for each cell phone use group.



Agarwal. Cell phone usage and male infertility. Fertil Steril 2008.

TABLE 1

Semen analysis results in four cell phone use groups (values are mean \pm SD).

Parameters	Group A	Group B	Group C	Group D
Volume (mL)	2.86 \pm 1.67	3.16 \pm 1.62	2.83 \pm 1.40	3.37 \pm 1.80
Liquefaction time (min)	20.00 \pm 3.58	20.04 \pm 3.18	20.85 \pm 3.56	20.39 \pm 4.11
pH	7.67 \pm 0.20	7.67 \pm 0.18	7.76 \pm 0.19	7.78 \pm 0.16
Viscosity	3.00 \pm 1.01	2.98 \pm 1.03	3.11 \pm 1.21	2.95 \pm 1.14
Sperm count ($\times 10^6$ /mL)	85.89 \pm 35.56	69.03 \pm 40.25	58.87 \pm 51.92	50.30 \pm 41.92
Motility (%)	67.80 \pm 6.16	64.57 \pm 8.47	54.72 \pm 10.97	44.81 \pm 16.30
Viability (%)	71.77 \pm 6.75	68.21 \pm 8.65	57.95 \pm 11.28	47.61 \pm 16.67
WHO morphology (% normal)	40.32 \pm 13.06	31.24 \pm 12.24	21.36 \pm 10.12	18.40 \pm 10.38

Note: Group A: no use (n = 40); group B: <2 h/day (n = 107); group C: 2–4 h/day (n = 100); and group D: >4 h/day (n = 114). Means and SD were based on data on the original scale; all analyses were done with appropriately transformed data.

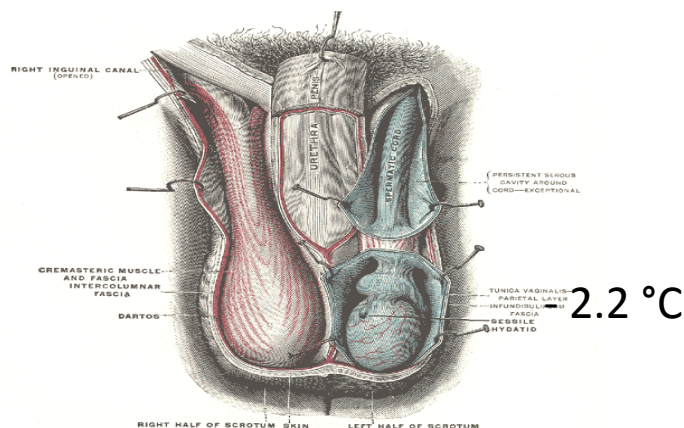
Agarwal. Cell phone usage and male infertility. Fertil Steril 2008.

In conclusion, our results suggest that the use of cell phones by men is associated with a decrease in semen quality. The decrease in sperm count, motility, viability, and normal morphology is related to the duration of exposure to cell phones. These effects may not depend on the initial semen quality of the subjects. More studies are needed to identify the mechanism involved in the reduction of semen quality.

Effetto diretto delle radiazioni elettromagnetiche, legato alla sede

Effect of cell phone usage on semen analysis in men attending infertility clinic: an observational study

Agarwal A. Fertil Steril 2008



- Criptorchidismo, Varicocele, Febbre
- Sauna
- Posizione a letto
- Guida di automobili
- Postura seduta
- Uso di PC
- Scaldasonno

Table 1 Synopsis of factors discussed to induce genital heat stress

Source of genital heat stress	Scrotal/testicular temperature	Semen quality/fertility parameters
Disposable plastic-lined diapers versus reusable cotton diapers	No temperature difference for the common use of cotton diapers with plastic pants	No data
Genital insulation during sleep	Increased	Negative influence not documented
Duration of sedentary posture	Increased	Negative influence not documented
Increased mean daytime scrotal temperature	–	Reduced
Professional drivers	Increased	Reduced, predominantly drivers of vans, trucks or industrial heavy machinery affected (confounders?)
Sitting with portable computers in a laptop position	Increased	No data
Sitting on heated floors	Increased	No data
Sitting on a heated car seat	Increased	No data
Tight-fitting underwear	Increased	Negative influence not sufficiently proven
Occupational exposure to high temperatures	Insufficient database	Insufficient database
Sauna sessions	Increased	Negative influence not sufficiently proven
Varicocele	Increased	Conflicting results
Fever episodes (3 days, >39 °C)	Increased	Impaired
Genital heat exposure in a waterbath (>43 °C)	Increased	Impaired

REVIEW ARTICLE

Influence of genital heat stress on semen quality in humans

A. Jung & H.-C. Schuppe

Center of Dermatology and Andrology, Justus Liebig University, Gießen, Germany



LOH (Late onset Hypogonadism) o TDS



- TDS è una sindrome *clinica E biochimica*
- È caratterizzata da ipotestosteronemia e sintomi specifici
- Associata con il processo di invecchiamento
- Interessa molteplici organi ed apparati e determina alterazioni della QOL
- E' responsabile di disturbi sessuali



Chi studiare?

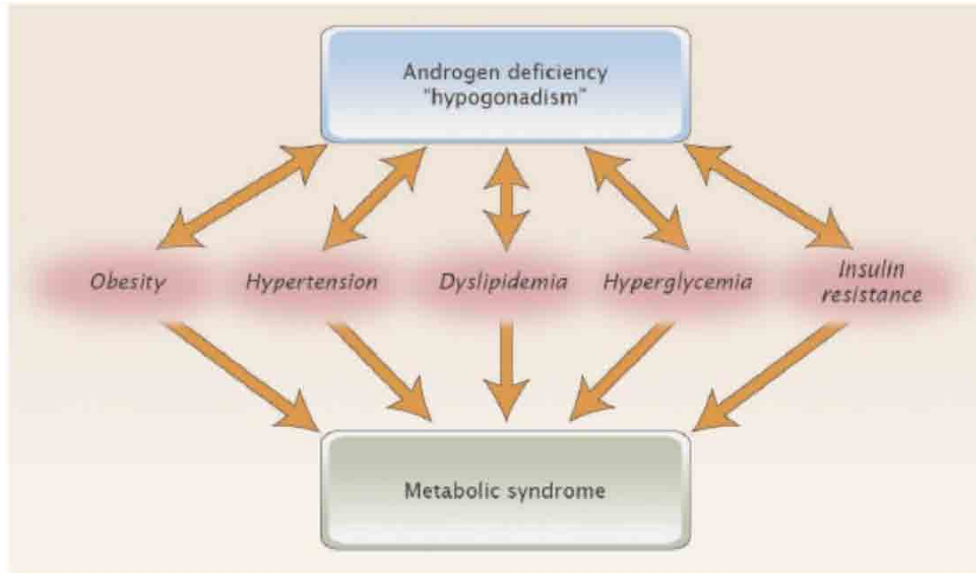




Fattori di rischio per TDS



- ✓ Obesità
- ✓ Sindrome metabolica
- ✓ DM 2
- ✓ Iperprolattinemia
- ✓ Farmaci
- ✓ BPCO



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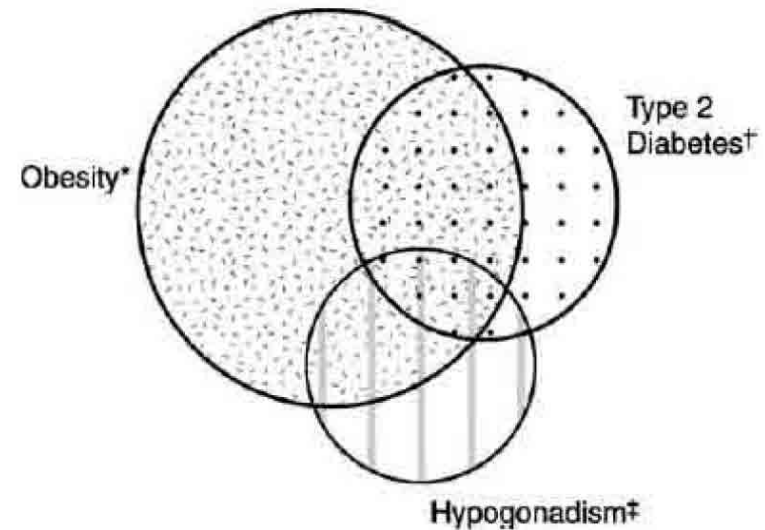
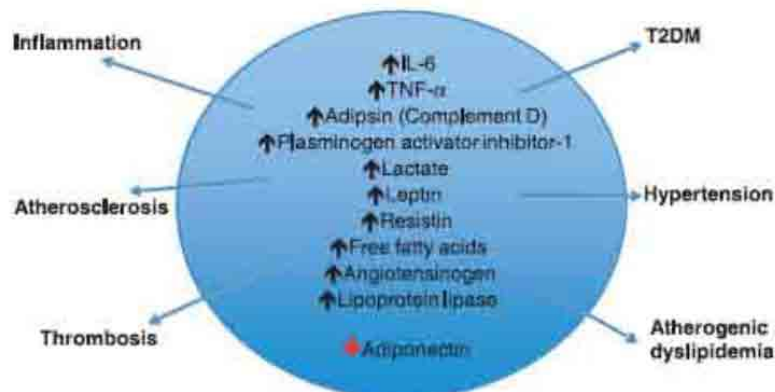


Figure 1 Populations of American men with obesity, type II diabetes, and hypogonadism display a high degree of overlap. *21.4 million men were considered obese in 2001.⁴⁵ †6.9 million men had type II diabetes in 2001.⁴⁵ ‡5 million men are thought to be hypogonadal.⁴⁶

Adipose tissue is an endocrine organ

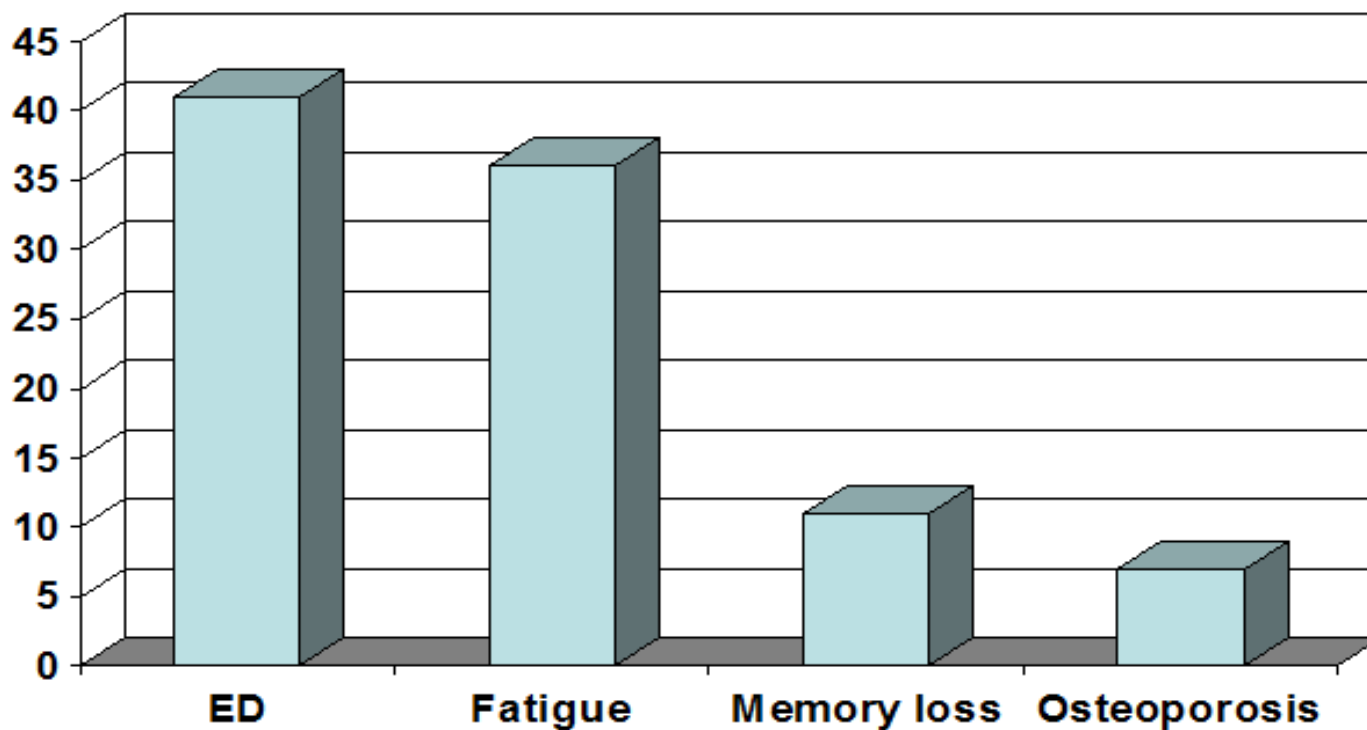




Chi trattare?

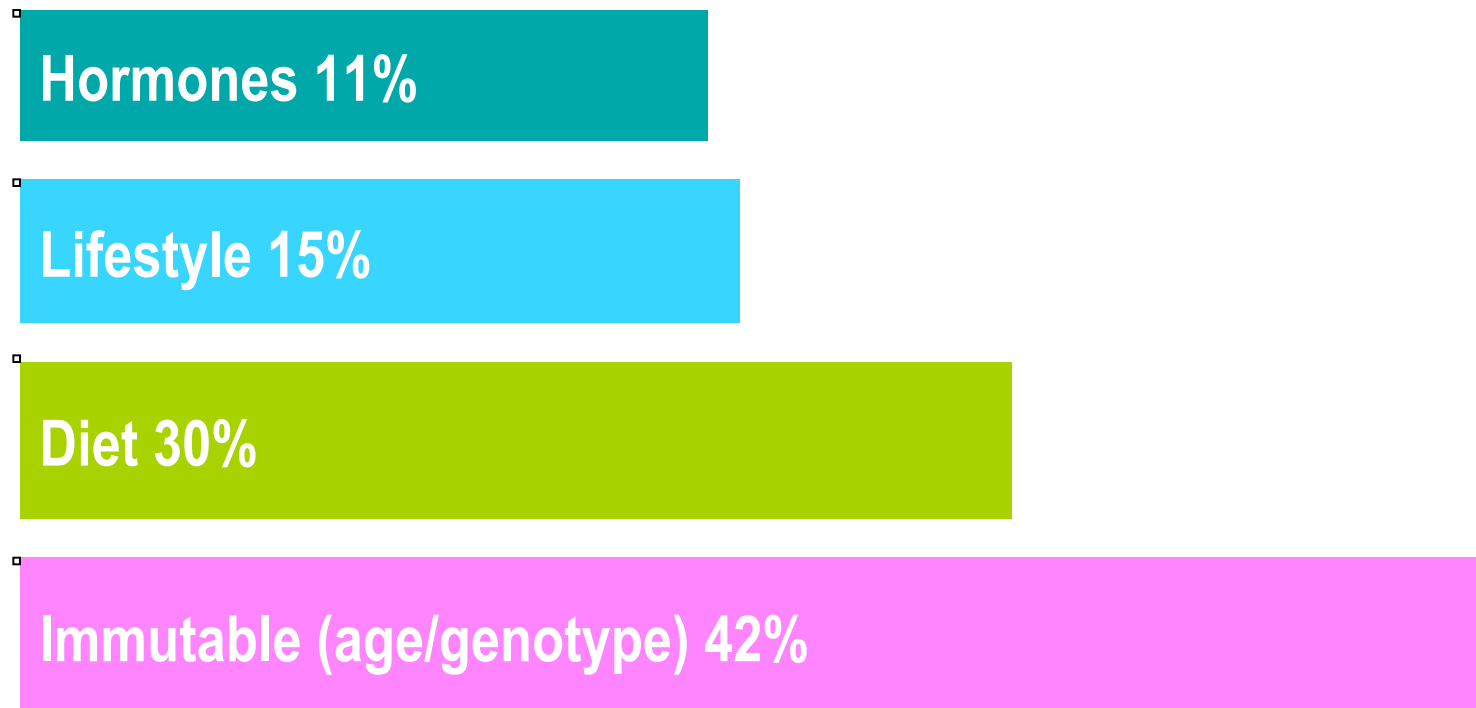


Symptoms in hypoandrogenism





Relative importance in analysis of prostate cancer in MMAS





Effect of Testosterone Replacement Therapy on Prostate Tissue in Men With Late-Onset Hypogonadism

A Randomized Controlled Trial



Table 2. Clinical, Hormonal, and Histological Results for Baseline vs 6 Months*

	Testosterone Replacement Therapy (n = 21)			Placebo (n = 19)		
	Baseline	6 mo	P Value†	Baseline	6 mo	P Value†
Clinical						
International Prostate Symptom Score (voiding symptoms)	13.0 (0-26.0)	12.5 (0-30.0)	.43	11.0 (0-27.0)	9.5 (2.0-28.0)	.50
Uroflowmetry rate, mL/s	14.0 (4.0-31.0)	10.6 (4.8-18.9)	.09	10.6 (7.3-22.7)	8.5 (3.0-20.1)	.13
Prostate volume, mL						
Whole	43.8 (15.5-112.0)	42.0 (19.8-117.9)	.16	36.8 (17.2-105.0)	29.4 (17.8-93.0)	.20
Transition zone	21.8 (4.8-76.5)	15.4 (4.1-74.8)	.58	18.4 (6.44-54.0)	16.0 (6.9-55.2)	.47
Prostate-specific antigen, ng/mL						
Total	1.55 (0.30-5.80)	2.29 (0.40-7.10)	<.001	0.97 (0.10-2.50)	1.10 (0.02-6.90)	.006
Free	0.49 (0.20-1.60)	0.68 (0.20-2.13)	<.001	0.21 (0.04-0.66)	0.30 (0.01-5.47)	.13
Hemoglobin, g/dL	14.5 (11.0-18.0)	15.9 (12.1-20.4)	<.001	14.9 (12.6-16.1)	14.8 (12.8-16.0)	.30
Hematocrit, %	43.2 (35.2-50.5)	47.6 (38.8-57.4)	<.001	43.6 (37.4-48.2)	43.4 (37.8-47.6)	.20
Hormonal						
Testosterone						
Total, ng/dL	282 (182-444)	640 (272-1190)	<.001	282 (135-391)	273 (89-715)	.11
Free, pg/mL‡	48 (17-102)	162 (35-309)	<.001	51 (16-66)	42 (8-114)	.16
Dihydrotestosterone, ng/dL	28 (18-56)	47 (20-121)	.002	28 (11-52)	26 (7-40)	.20
Estradiol, pg/mL	22 (6-41)	37 (18-95)	.006	15 (12-36)	17 (10-19)	.67
Luteinizing hormone, IU/L	4.50 (1.10-16.00)	0.10 (0.03-13.00)	<.001	4.80 (1.80-32.00)	4.10 (1.20-40.00)	.79
Sex hormone-binding globulin, µg/dL	0.6 (0.2-2.0)	0.6 (0.1-1.2)	.005	0.7 (0.1-1.3)	0.8 (0.2-1.7)	.82
Testosterone tissue, ng/g	0.91 (0.15-16.46)	1.55 (0.10-23.11)	.29	2.00 (0.11-6.92)	0.88 (0.02-20.12)	.05
Dihydrotestosterone tissue, ng/g	6.79 (3.26-19.59)	6.82 (1.57-39.82)	.51	8.15 (1.21-18.70)	5.10 (0.70-22.37)	.01
Histological						
Carcinoma, No.	0	2		0	4	
High-grade intraepithelial neoplasia, No.	5	2		3	3	
Atrophy score, % of glands	8 (1-50)	1 (1-25)	.01	8 (1-75)	6 (1-75)	.23
Stroma-epithelial ratio	2.06 (0.86-3.80)	2.47 (0.54-5.54)	.69	2.18 (0.50-4.98)	2.65 (0.11-7.95)	.21
Biomarkers						
MIB1 (Ki-67), % of positive cells	0.53 (0.27-1.34)	0.63 (0.33-1.38)	.09	0.45 (0.23-0.86)	0.49 (0.29-1.52)	.70
Androgen receptor, % of positive cells						
Epithelium	80 (50-90)	80 (55-90)	.75	80 (60-90)	85 (65-90)	.18
Stroma	16 (5-60)	33 (8-75)	.02	24 (8-70)	48 (13-60)	.09
CD34, microvessel/200 × field	63.0 (25.0-97.5)	66.0 (48.5-89.0)	.37	65.5 (42.0-90.0)	71.5 (36.0-90.5)	.89

SI conversion factors: To convert estradiol to pmol/L, multiply by 3.671; total testosterone to nmol, multiply by 0.0347.

*Values are expressed as median (range) unless otherwise indicated. Of the 44 men randomized, 3 did not complete the trial and a fourth was excluded because baseline serum testosterone was higher than 700 ng/dL, indicating an error in screening.

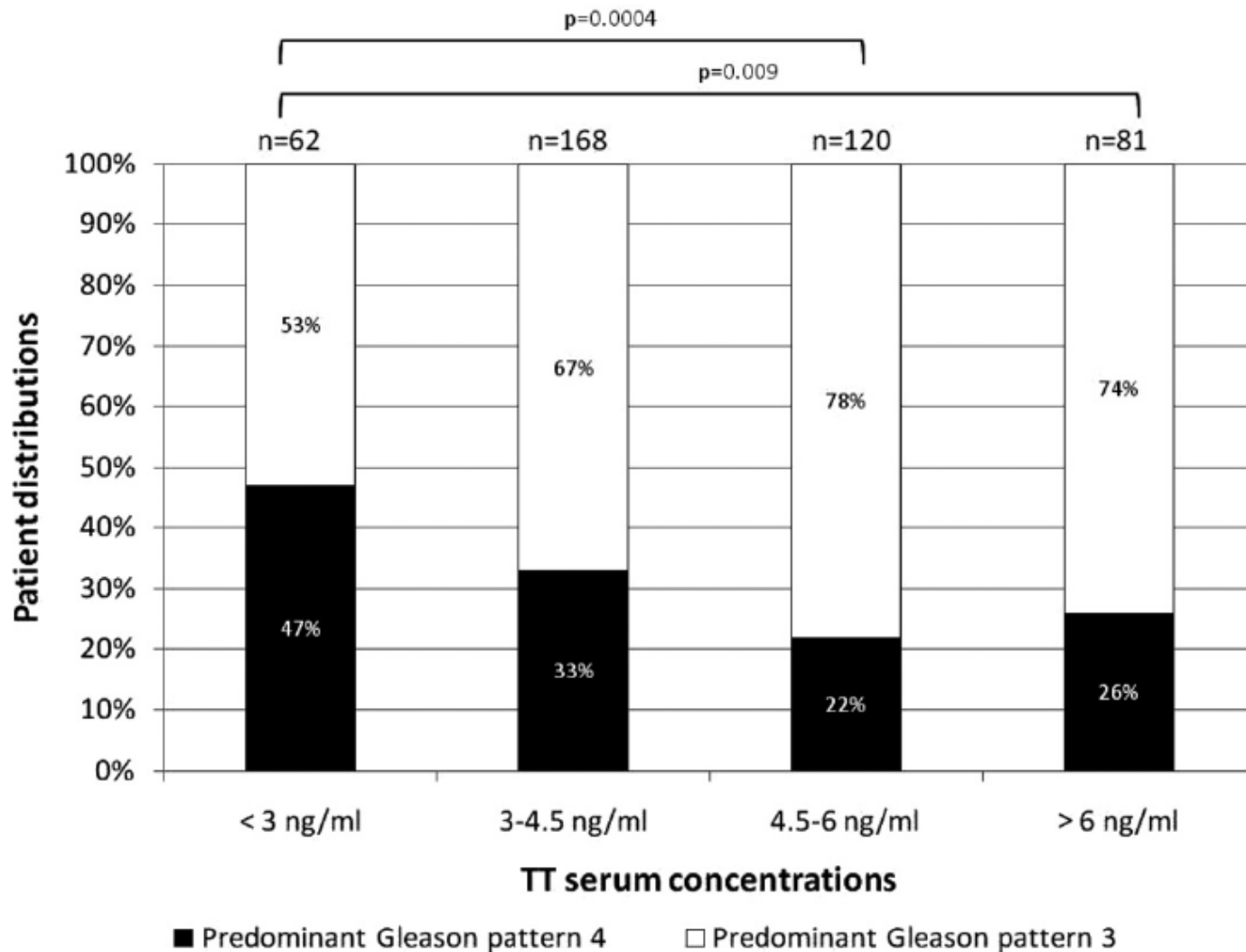
†Calculated using the signed rank test.

‡Normal value for adult males is 52 to 280 pg/mL. Free testosterone at baseline was less than 70 pg/mL in 90% of participants.



High Incidence of Predominant Gleason Pattern 4 Localized Prostate Cancer is Associated With Low Serum Testosterone

Henry Botto,* Yann Neuzillet, Thierry Lebret, Philippe Camparo, Vincent Molinie and Jean-Pierre Raynaud





Testosterone Therapy in Men with Androgen Deficiency Syndromes: An Endocrine Society Clinical Practice Guideline



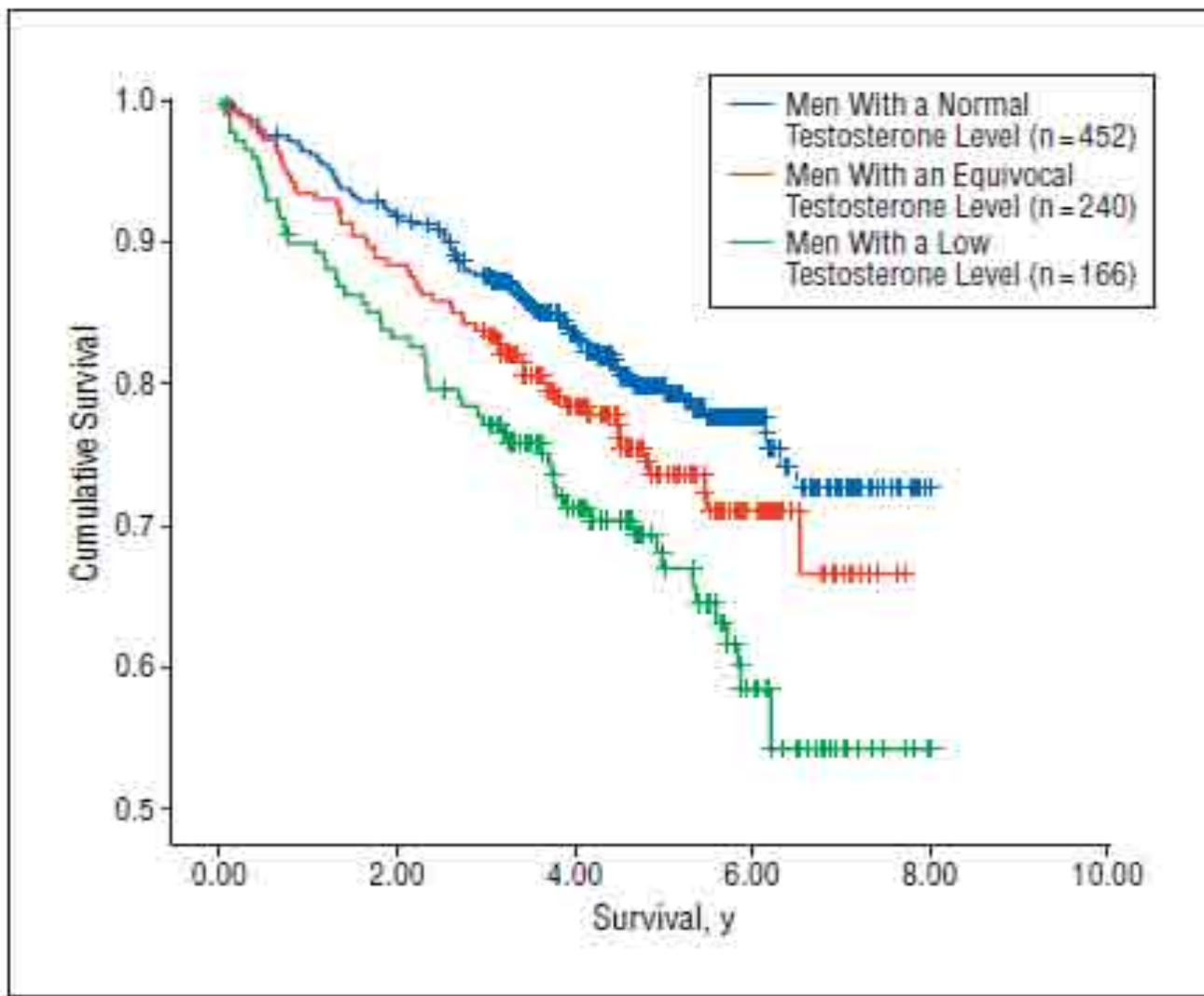
We recommend that clinicians assess prostate cancer risk in men being considered for testosterone therapy. We recommend against testosterone therapy without further urological evaluation in patients with palpable prostate nodule or induration or PSA greater than 4 ng/ml or PSA greater than 3 ng/ml in men at high risk of prostate cancer, such as African-Americans or men with first-degree relatives with prostate cancer. (1|⊕○○○)

We recommend against testosterone therapy in patients with breast (1|⊕○○○) or prostate cancer. (1|⊕⊕○○)

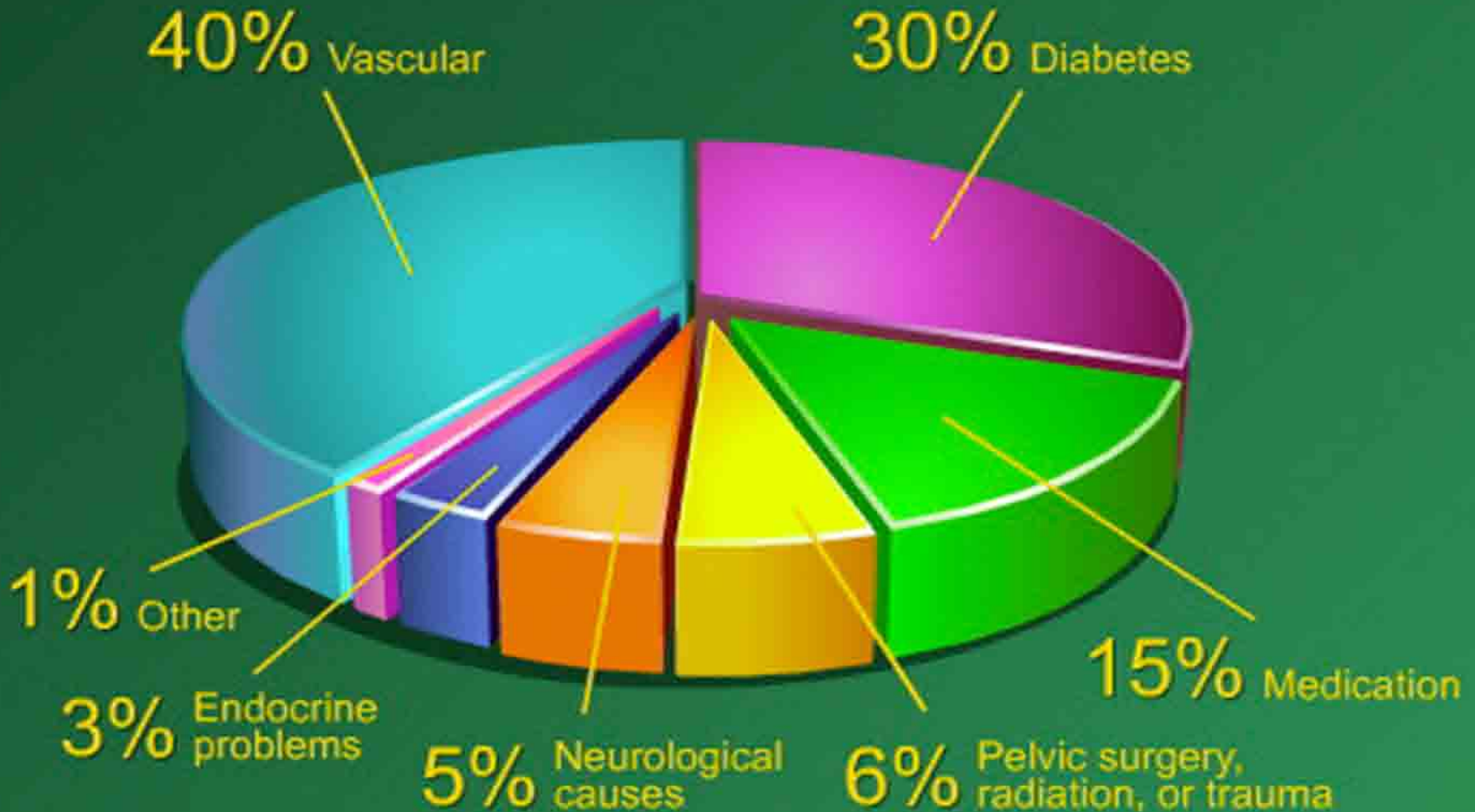


Low Serum Testosterone and Mortality in Male Veterans

Molly M. Shores, MD; Alvin M. Matsumoto, MD; Kevin L. Sloan, MD; Daniel R. Kivlahan, PhD



Cause di Disfunzione Erettile





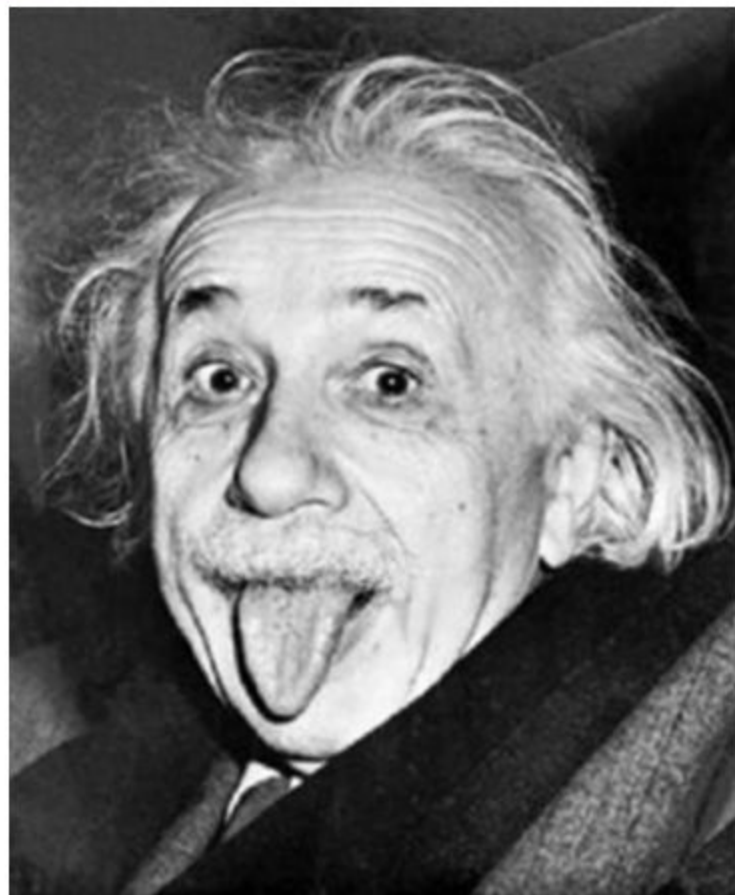
Andrologo=Internista



- DE : Sintomo iniziale di patologia, sptt cardiovascolare, non nota
- Evoluzione di DE «marker» di progressione di patologia sottostante
- Cardiologi : sospettare DE in pz. Con patologia cardiovascolare
- Andrologi : sospettare patologia cardiovascolare in pz. DE
- Diabetologi : «nunc et semper»

- Sildenafil
- Avanafil
- Tadalafil
- Vardenafil

“La mente è come un paracadute:
funziona solo se si apre.” A. Einstein



Grazie a tutti
per
l'attenzione