Andrologia: svantaggi di genere maschile

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Infertility

Sexual dysfunction

General Health

Metabolic Syndrome

Diabetes

CVD

Sexual dysfunction

Metabolic syndrome

GENDER MEDICINE ISSUE

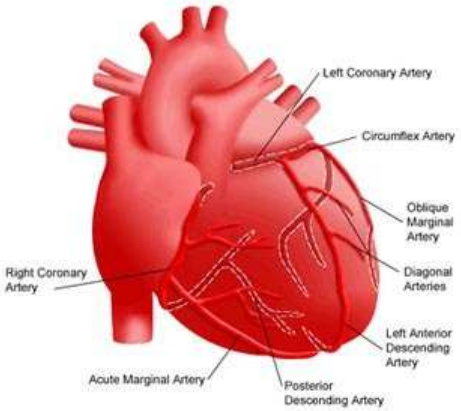
ORIGINAL CONTRIBUTION

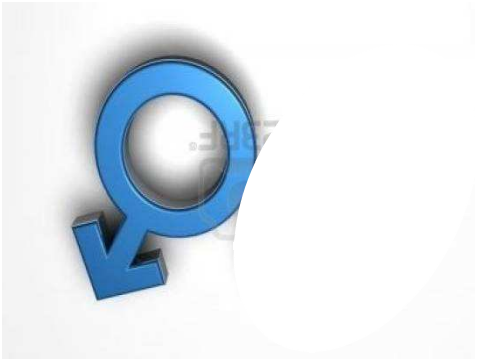
Erectile Dysfunction and Subsequent Cardiovascular Disease

Ian M. Thompson, MD
Catherine M. Tangen, DrPH
Phyllis J. Goodman, MS

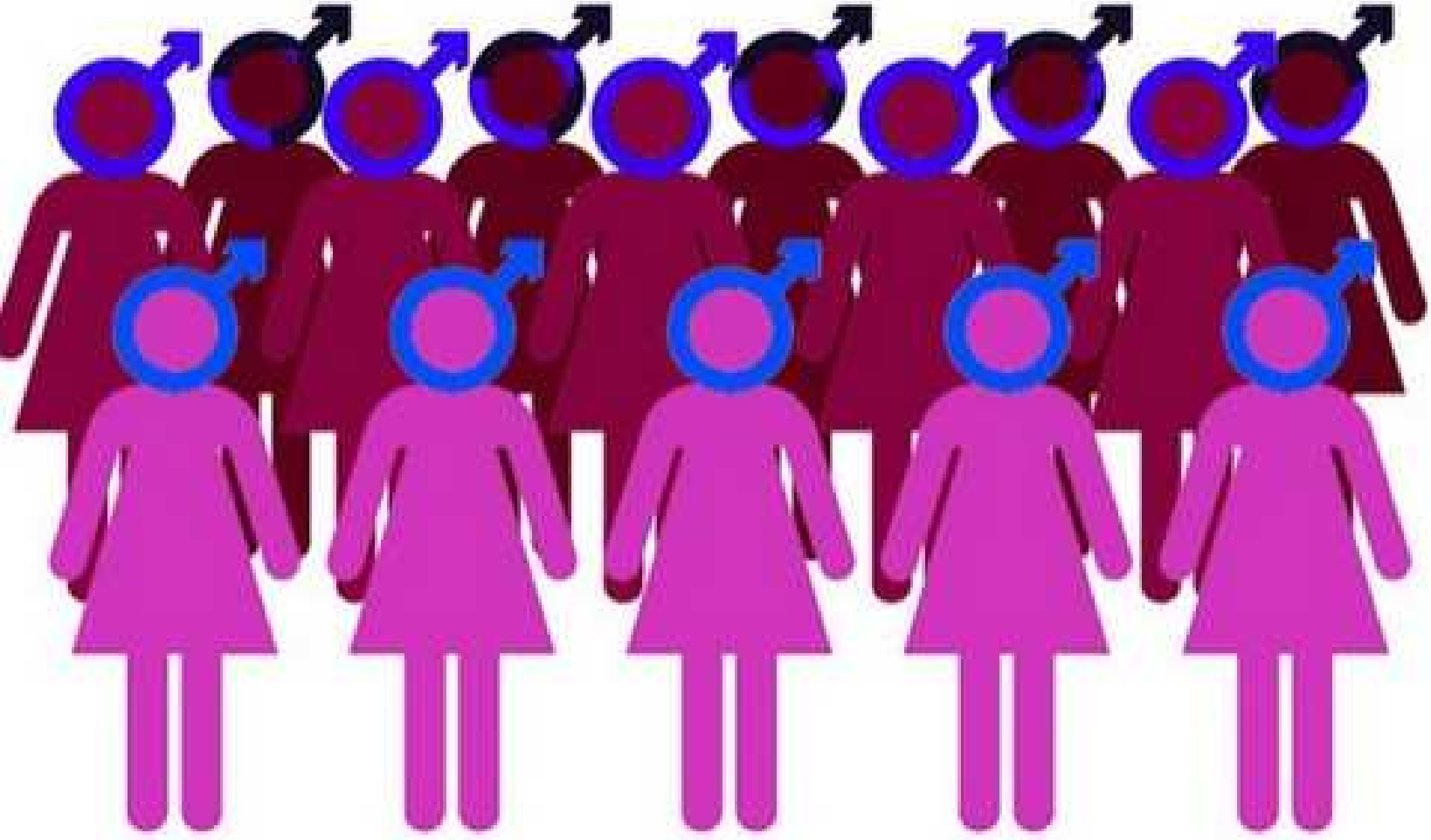
Context The risk factors for cardiovascular disease and erectile dysfunction are similar.

Objective To examine the association of erectile dysfunction and subsequent cardiovascular disease.





#ED is a harbinger of CVD
#Sexual activity stimulates T



Can FSD be a mirror of cardiovascular health in women?

CLINICAL RESEARCH STUDY

THE AMERICAN JOURNAL of MEDICINE®

Sexual Satisfaction and Cardiovascular Disease: The Women's Health Initiative

Jennifer S. McCall-Hosenfeld, MD, MSc,[a,b] Karen M. Freund, MD, MPH,[b] Claudine Legault, PhD,[c] Sarah A. Jaramillo, MS,[c] Barbara B. Cochrane, PhD, RN,[d] JoAnn E. Manson, MD, DrPH,[e] Nanette K. Wenger, MD,[f] Charles B. Eaton, MD, MS,[g] S. Gene McNeeley, MD,[h] Beatriz L. Rodriguez, MD, PhD,[i] Denise Bonds, MD, MPH[j]

[a]VA Boston Healthcare System, Mass; [b]Boston University, Mass; [c]Wake Forest University School of Medicine, Winston-Salem, NC; [d]University of Washington, Seattle; [e]Brigham and Women's Hospital, Boston, Mass; [f]Emory University, Atlanta, Ga; [g]Memorial Hospital of Rhode Island, Pawtucket; [h]Wayne State University, Detroit, Mich; [i]University of Hawaii, Manoa; [j]University of Virginia, Charlottesville.

Postmenopausal women aged 50 to 79 years, recruited at 40 clinical centers throughout the United States during 1994 through 1998

There were 93,676 women who participated in the observational cohort and were followed for 8-12 years

THE AMERICAN JOURNAL of MEDICINE®

Sexual Satisfaction and Cardiovascular Disease: The Women's Health Initiative

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[a]VA Boston Healthcare System, Mass; [b]Boston University, Mass; [c]Wake Forest University School of Medicine, Winston-Salem, NC; [d]University of Washington, Seattle; [e]Brigham and Women's Hospital, Boston, Mass; [f]Emory University, Atlanta, Ga; [g]Memorial Hospital of Rhode Island, Pawtucket; [h]Wayne ... [j]ottesville.

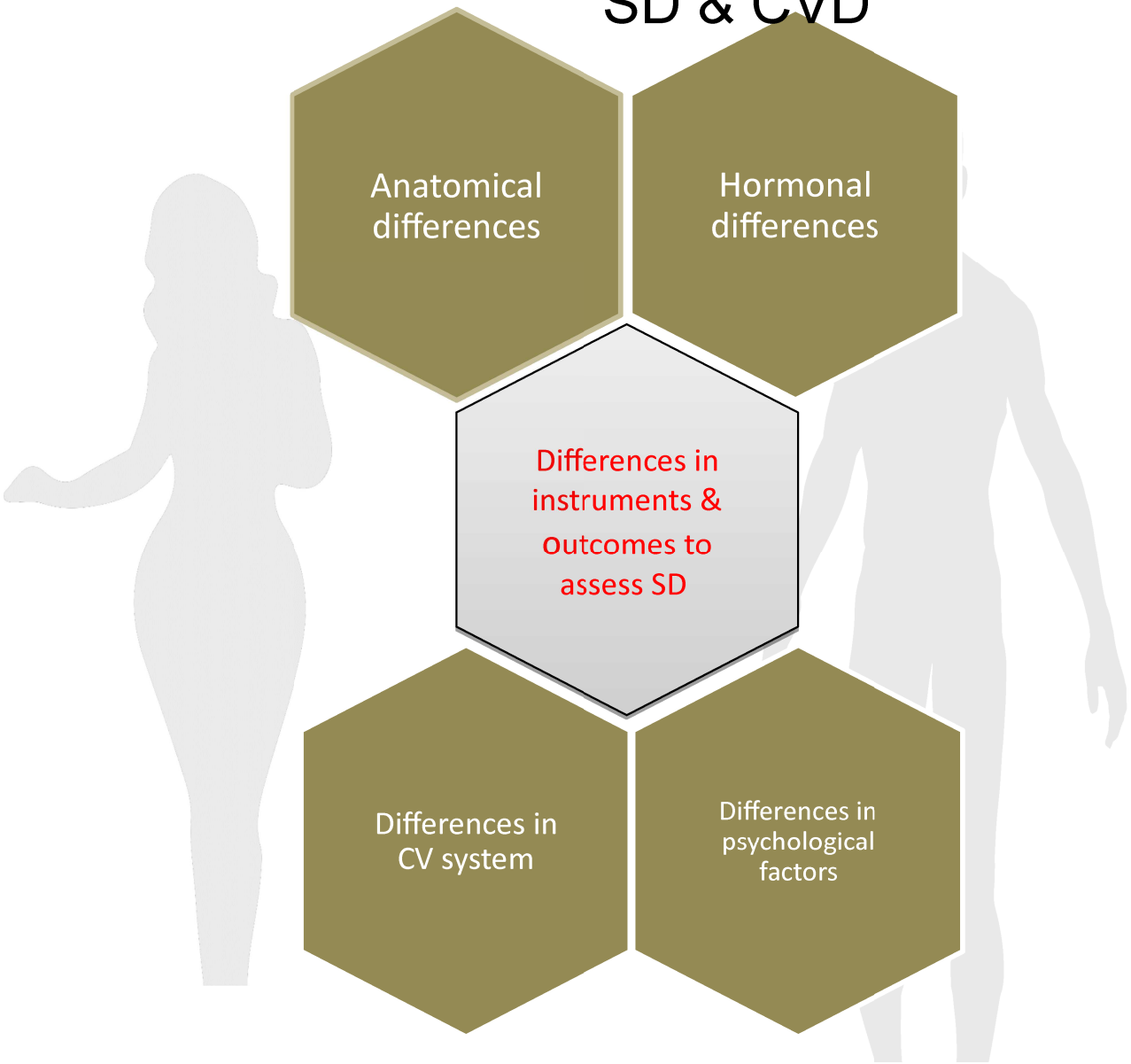
Table 3 Odds of Prevalent Cardiovascular Disease by Sexual Satisfaction Status at Baseline (Women's Health Initiative Observational Study)

Baseline Cardiovascular Disease	OR (95% CI)	aOR (95% CI)
Myocardial infarction*	1.11 (0.94-1.31)	1.09 (0.88-1.36)
Stroke†	1.20 (0.98-1.47)	1.23 (0.99-1.52)
Coronary revascularization‡	0.89 (0.73-1.08)	0.92 (0.72-1.17)
Composite cardiovascular disease§	1.04 (0.92-1.17)	0.94 (0.78-1.11)
Peripheral arterial disease‖	1.52 (1.30-1.79)	1.44 (1.15-1.82)
Angina¶	0.98 (0.88-1.09)	0.77 (0.66-0.90)
Congestive heart failure**	0.95 (0.71-1.28)	0.93 (0.63-1.36)

No increased prevalence or incidence of cardiovascular disease among sexually active female subjects complaining of dissatisfaction with sexual activity at baseline, over 7.8 years of follow-up

CONCLUSIONS: Dissatisfaction with sexual activity was modestly associated with an increased prevalence of peripheral arterial disease, even after controlling for smoking status. However, dissatisfaction did not predict incident cardiovascular disease. Although this may represent insensitivity of the sexual satisfaction construct to measure sexual dysfunction in women, it might be due to physiological differences in sexual functioning between men and women.

Potential causes of gender differences in the relationship between SD & CVD



Maseroli et al., Sex Med Rev 2018

Infertility

Metabolic diseases

Ministero della Salute

RELAZIONE DEL MINISTRO DELLA SALUTE AL PARLAMENTO SULLO STATO DI ATTUAZIONE DELLA LEGGE CONTENENTE NORME IN MATERIA DI PROCREAZIONE MEDICALMENTE ASSISTITA (LEGGE 19 FEBBRAIO 2004, N. 40, ARTICOLO 15)

- Attività anno 2019 centri procreazione medicalmente assistita

41% delle coppie infertili presenta un fattore maschile

16.2% causa sconosciuta (fattore maschile??)

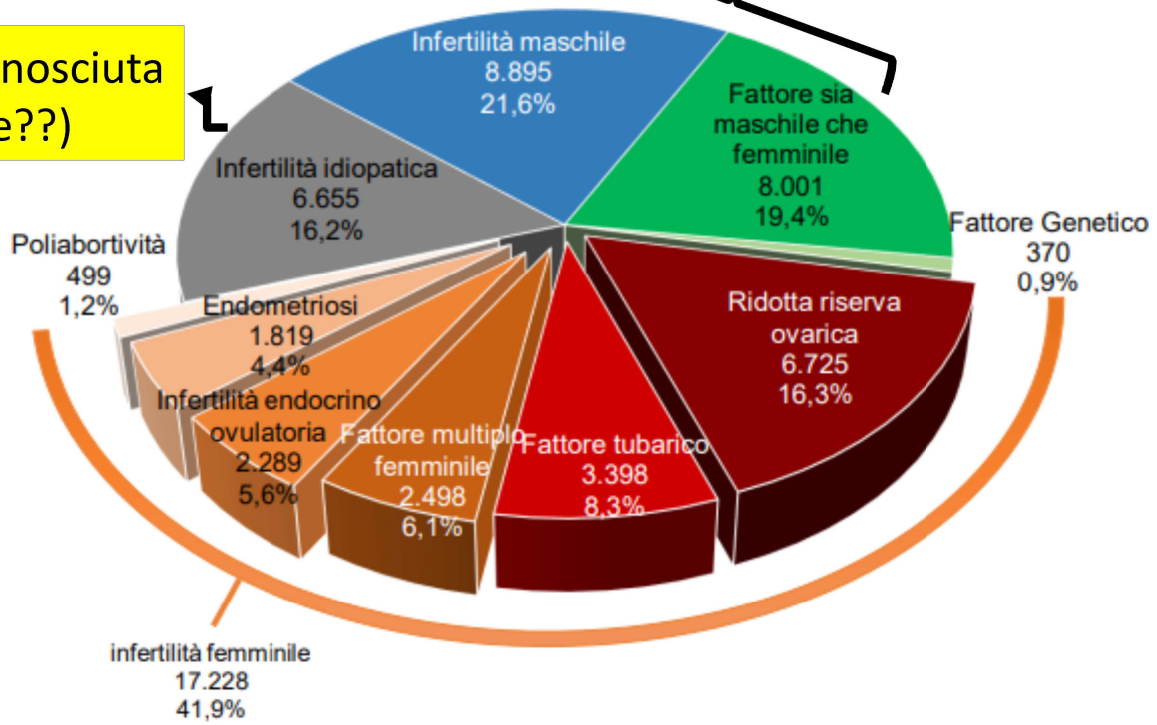
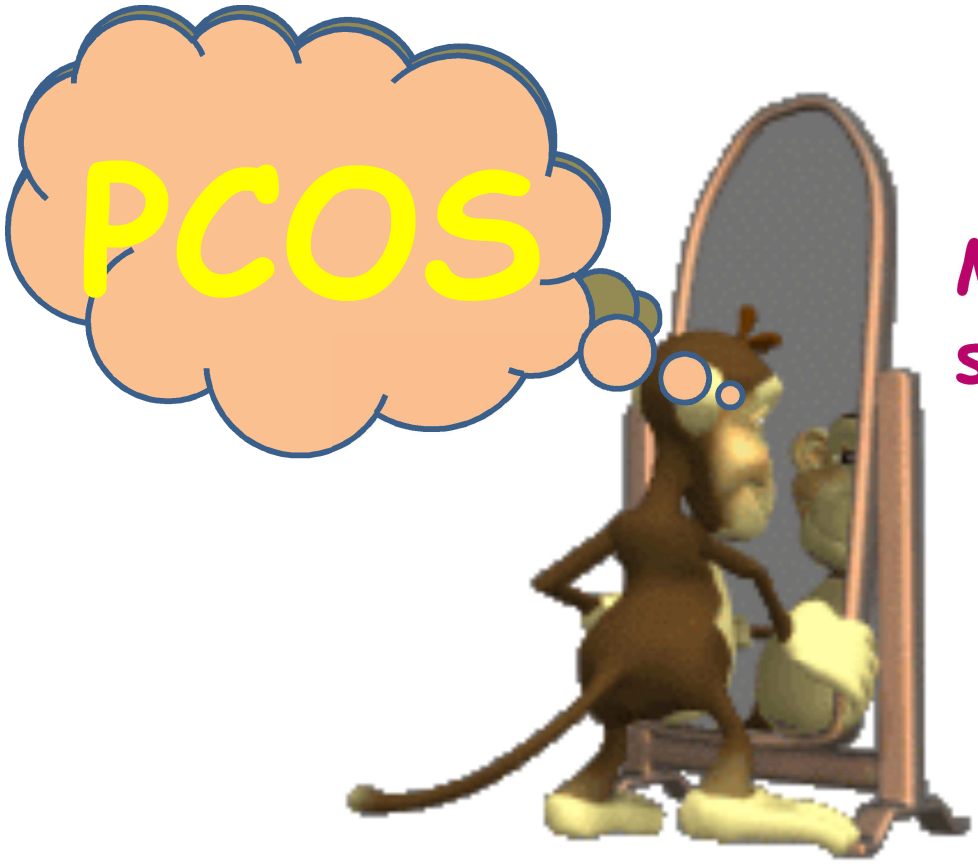
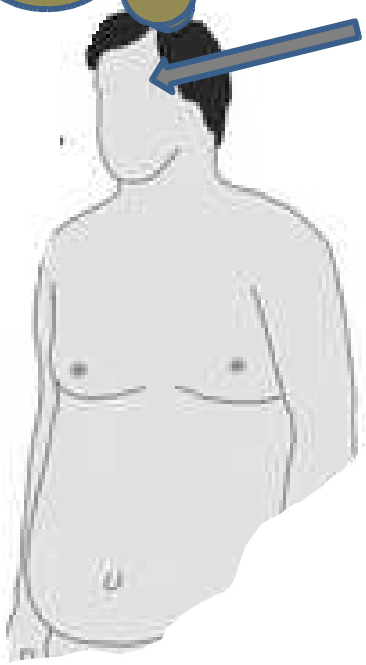


Figura 8. Indicazioni di infertilità per le 41.149 coppie trattate con tecniche di PMA di II e III livello con trasferimento di embrioni a fresco (FIVET/ICSI) nel 2019



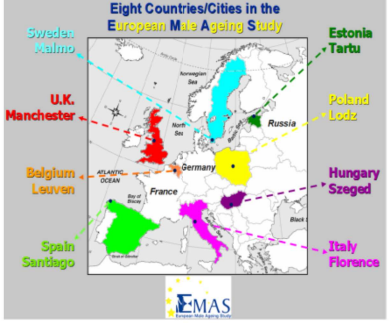
Metabolic syndrome

Alterations of reproductive axis



Hypogonadotropic Hypogonadism

Metabolic diseases

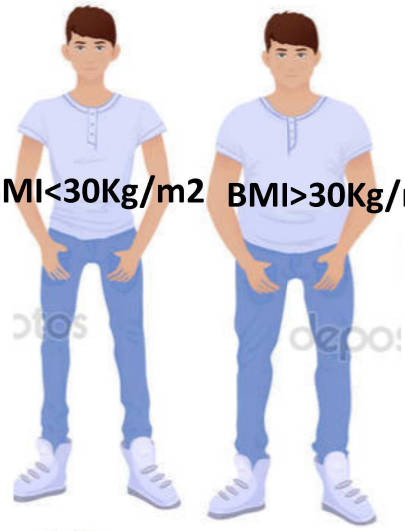


Hypothalamic-Pituitary-Testicular Axis Disruptions in Older Men Are Differentially Linked to Age and Modifiable Risk Factors: The European Male Aging Study

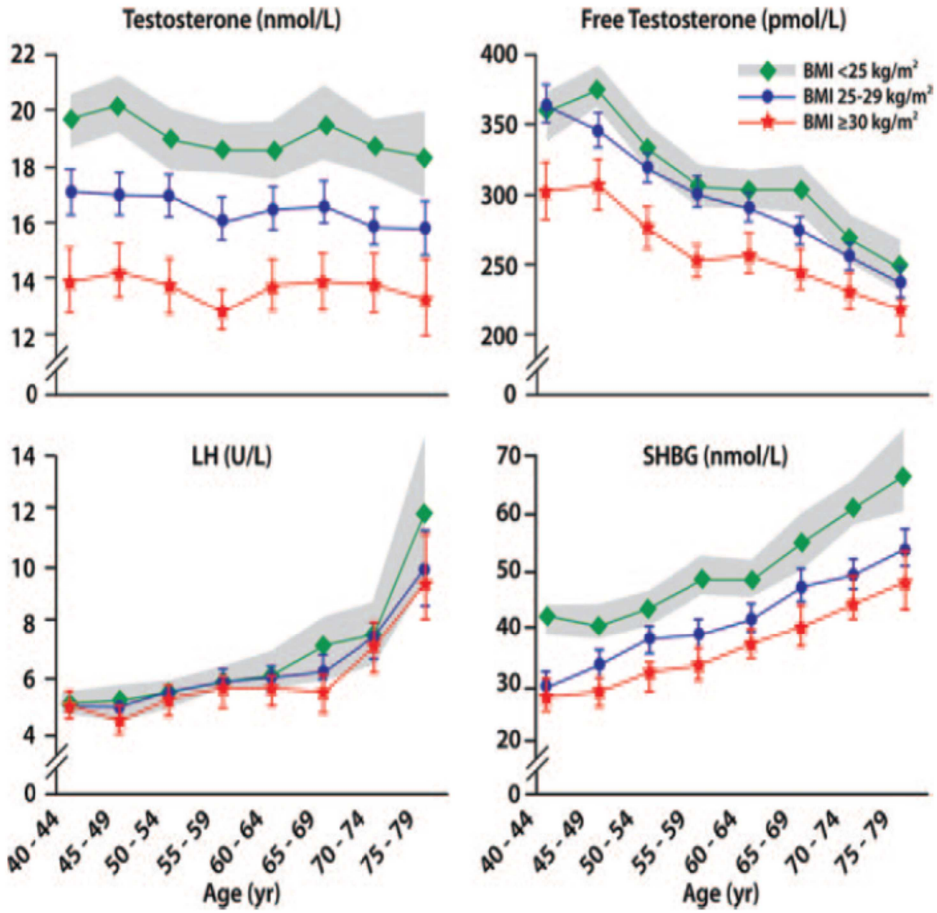
Frederick C. W. Wu, Abdelouahid Tajar, Stephen R. Pye, Alan J. Silman, Joseph D. Finn, Terence W. O'Neill, Gyorgy Bartfai, Felipe Casanueva, Gianni Forti, Aleksander Giwercman, Ilpo T. Huhtaniemi, Krzysztof Kula, Margus Punab, Steven Boonen, Dirk Vanderschueren, and The European Male Aging Study Group

J Clin Endocrinol Metab, July 2008, 93(7):2737–2745

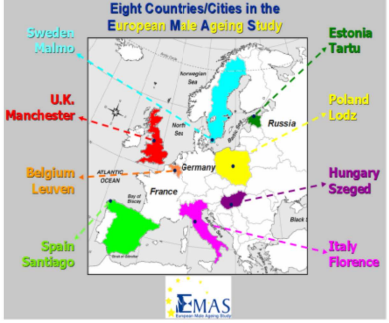
dojournals.org). Thus, a change in BMI from nonobese to obese may be equivalent to a 15 yr fall in T. Similar findings have recently been reported in longitudinal U.S. population studies (26). It is noteworthy that the effects of obesity on the HPT axis



BMI<30Kg/m2 BMI>30Kg/m2



EMAS European Male Ageing Study



Hypothalamic-Pituitary-Testicular Axis Disruptions in Older Men Are Differentially Linked to Age and Modifiable Risk Factors: The European Male Aging Study

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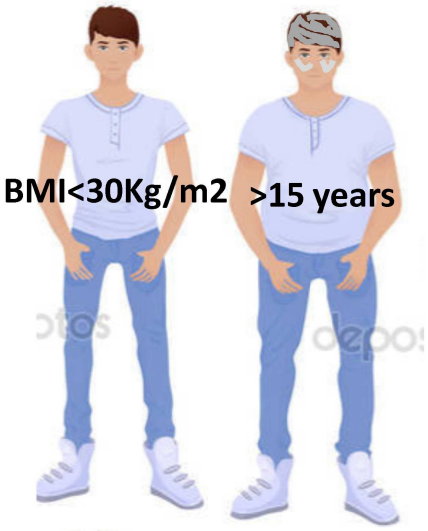
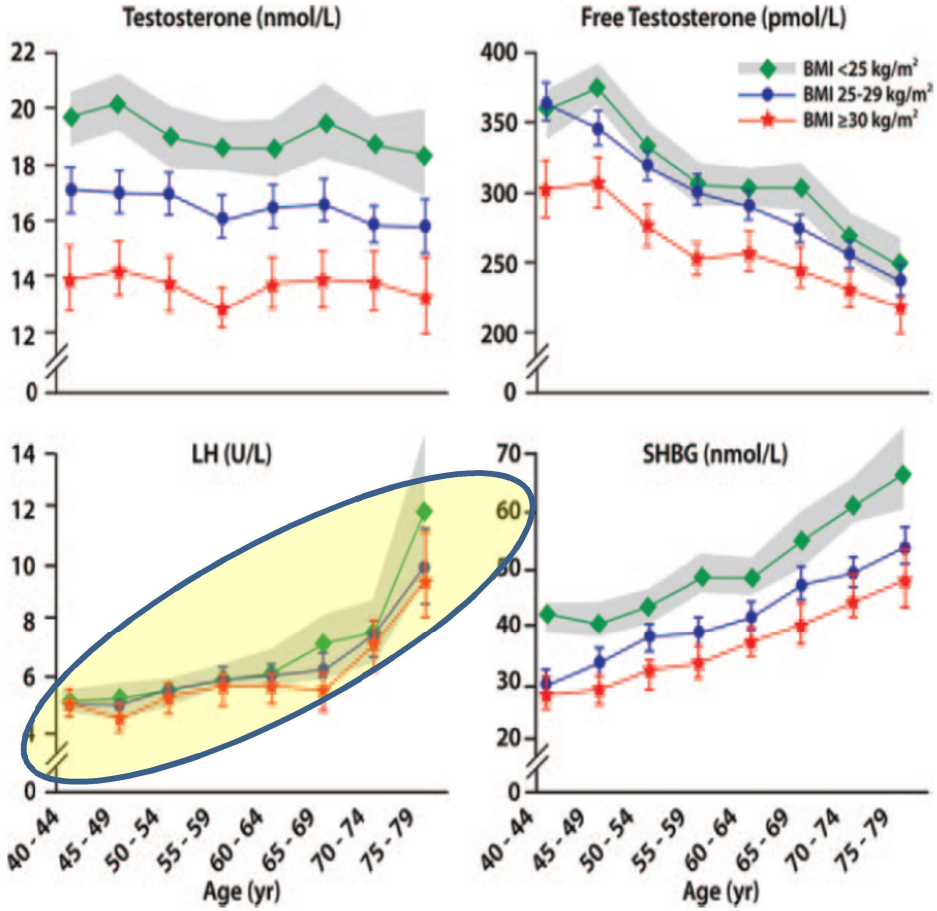
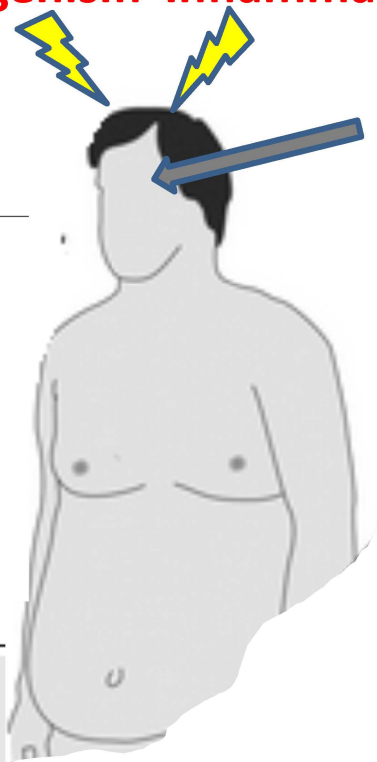




EMAS
European Male Ageing Study

Hyperestrogenism Inflammation

Hypogonadotropic Hypogonadism



CLINICAL RESEARCH ARTICLE

Tumor Necrosis Factor-α Impairs Kisspeptin Signaling in Human Gonadotropin-Releasing Hormone Primary Neurons

Erica Sarchielli,[1] Paolo Comeglio,[4] Roberta Squecco,[2] Lara Ballerini,[3] Tommaso Mello,[5] Giulia Guarnieri,[1] Eglantina Idrizaj,[2] Benedetta Mazzanti,[3] Linda Vignozzi,[4] Pasquale Gallina,[6] Mario Maggi,[4,7] Gabriella B. Vannelli,[1] and Annamaria Morelli[1]

[1]Section of Human Anatomy and Histology, [2]Section of Physiological Sciences, and [3]Cell Therapy and Transfusion Medicine Unit, Department of Experimental and Clinical Medicine, University of Florence, 50134 Florence, Italy; [4]Sexual Medicine and Andrology Unit and [5]Gastroenterology Unit, Department of Experimental and Clinical Biomedical Sciences "Mario Serio," University of Florence, 50134 Florence, Italy; [6]Neurosurgery School of Tuscany, Department of Surgery and Translational Medicine, University of Florence, 50139 Florence, Italy; and [7]Istituto Nazionale Biostrutture e Biosistemi, 00136 Rome, Italy

Molecular and Cellular Endocrinology 382 (2014) 107–119

Contents lists available at ScienceDirect

Molecular and Cellular Endocrinology

journal homepage: www.elsevier.com/locate/mce

Metabolic syndrome induces inflammation and impairs gonadotropin-releasing hormone neurons in the preoptic area of the hypothalamus in rabbits

Annamaria Morelli [a], Erica Sarchielli [a], Paolo Comeglio [b], Sandra Filippi [c], Linda Vignozzi [b], Mirca Marini [a], Giulia Rastrelli [b], Elena Maneschi [b], Ilaria Cellai [b], Luca Persani [d,f], Luciano Adorini [e], Gabriella B. Vannelli [a], Mario Maggi [b,f,g,*]

ORIGINAL RESEARCH—BASIC SCIENCE

Estrogen Mediates Metabolic Syndrome-Induced Erectile Dysfunction: A Study in the Rabbit

Linda Vignozzi, MD, PhD,* Sandra Filippi, PhD,† Paolo Comeglio, PhD,* Ilaria Cellai, PhD,* Annamaria Morelli, PhD,‡ Matilde Marchetta, PhD,* and Mario Maggi, MD*

*Sexual Medicine and Andrology Unit, Department of Experimental and Clinical Biomedical Sciences, University of Florence, Florence, Italy; †Interdepartmental Laboratory of Functional and Cellular Pharmacology of Reproduction, Department of Experimental and Clinical Biomedical Sciences and NEUROFARBA, University of Florence, Florence, Italy; ‡Section of Anatomy and Histology, Department of Experimental and Clinical Medicine, University of Florence, Florence, Italy

Molecular and Cellular Endocrinology 384 (2014) 143–154

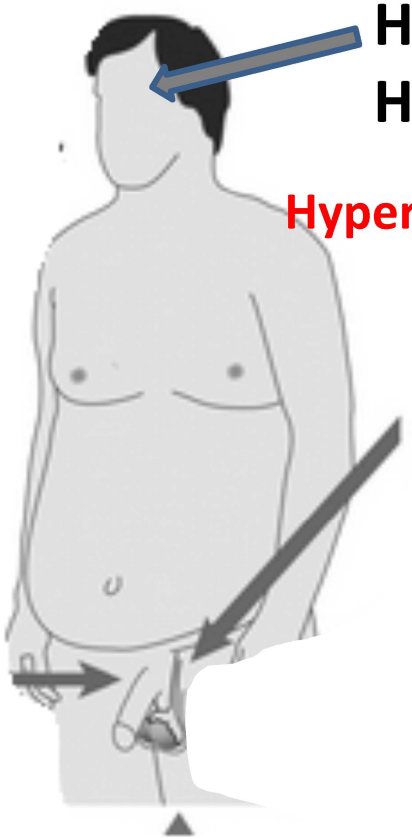
Contents lists available at ScienceDirect

Molecular and Cellular Endocrinology

journal homepage: www.elsevier.com/locate/mce

Nonalcoholic steatohepatitis as a novel player in metabolic syndrome-induced erectile dysfunction: An experimental study in the rabbit

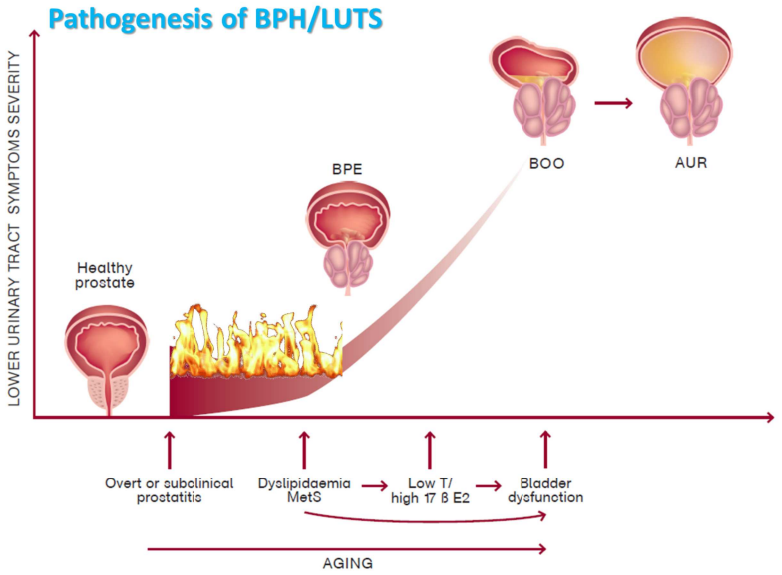
Linda Vignozzi [a], Sandra Filippi [b], Paolo Comeglio [a], Ilaria Cellai [a], Erica Sarchielli [c], Annamaria Morelli [c], Giulia Rastrelli [a], Elena Maneschi [a], Andrea Galli [d], Gabriella Barbara Vannelli [c], Farid Saad [e], Edoardo Mannucci [f], Luciano Adorini [g], Mario Maggi [a,*]

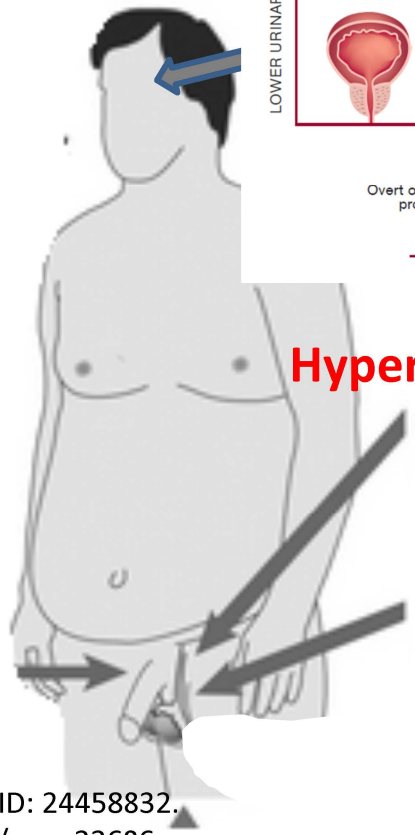


Hypogonadotropic Hypogonadism

Hyperestrogenism Inflammation

Erectile dysfunction

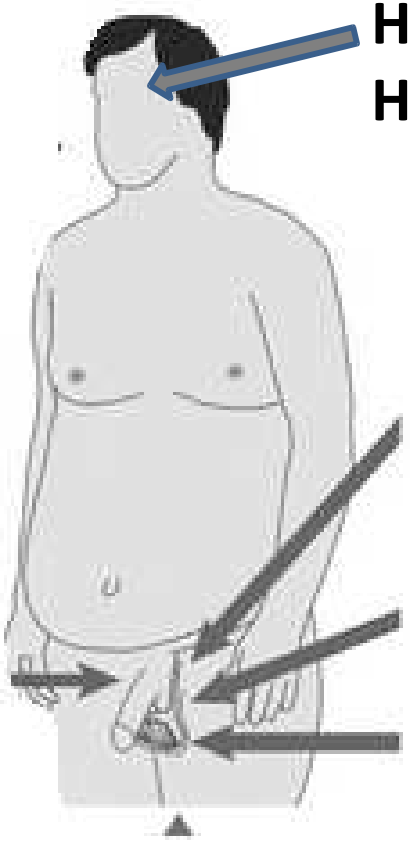




Hyperestrogenism **Inflammation**

Male accessory Gland inflammation

Lotti et al., J Endocrinol Invest. 2011;34:e336
Vignozzi et al., J Endocrinol Invest. 2014 Apr;37(4):313-22. doi: 10.1007/s40618-014-0051-3. Epub 2014 Jan 24. PubMed PMID: 24458832.
Vignozzi L et al Prostate. 2013 Sep;73(13):1391-402. doi: 10.1002/pros.22686. Epub 2013 Jun 13. PubMed PMID: 23765639.
Vignozzi L et al.,Prostate. 2013 Jun;73(8):789-800. doi: 10.1002/pros.22623. Epub 2012 Nov 28. PubMed PMID: 23620238.



Hypogonadotropic Hypogonadism

Erectile dysfunction

Male accessory Gland inflammation

Sperm alterations

Clinical data

Human Reproduction Update, Vol.19, No.3 pp. 221–231, 2013
Advanced Access publication on December 12, 2012 doi:10.1093/humupd/dms050

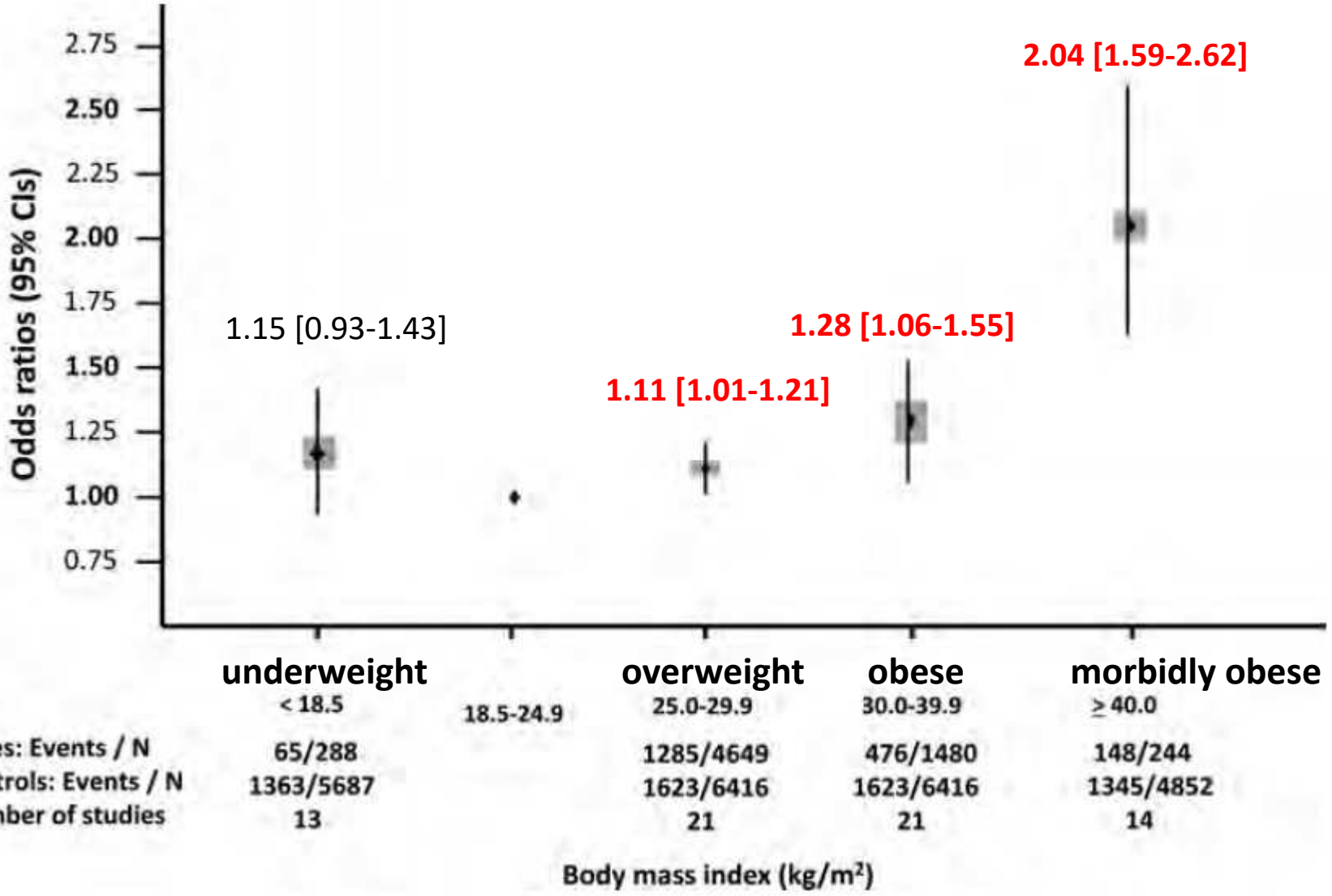
human reproduction update

BMI in relation to sperm count: an updated systematic review and collaborative meta-analysis

N. Sermondade[1,2], C. Faure[1,2], L. Fezeu[2], A.G. Shayeb[3], J.P. Bonde[4], T.K. Jensen[5], M. Van Wely[6], J. Cao[7], A.C. Martini[8], M. Eskandar[9], J.E. Chavarro[10,11], S. Koloszar[12], J.M. Twigt[13], C.H. Ramlau-Hansen[14], E. Borges Jr[15], F. Lotti[16], R.P.M. Steegers-Theunissen[13], B. Zorn[17], A.J. Polotsky[18], S. La Vignera[19], B. Eskenazi[20], K. Tremellen[21], E.V. Magnusdottir[22], I. Fejes[23], S. Hercberg[2,24], R. Lévy[1,2†], and S. Czernichow[25,26,*†]

A total of 21 studies were included in the meta-analysis, resulting in a sample of 13 077 men from the general population and attending fertility clinics.

Association between BMI and abnormal TCS (oligozoospermia or azoospermia) according to categories of BMI.



Sermonade et al., Hum Reprod Update. 2013;19:221

Human Reproduction, Vol.29, No.2 pp. 193–200, 2014
Advanced Access publication on December 4, 2013 doi:10.1093/humrep/det428

human reproduction ORIGINAL ARTICLE *Andrology*

The relationship between male BMI and waist circumference on semen quality: data from the LIFE study

Michael L. Eisenberg[1,*], Sungduk Kim[2], Zhen Chen[2], Rajeshwari Sundaram[2], Enrique F. Schisterman[2], and Germaine M. Buck Louis[2]

[1]Departments of Urology, Obstetrics and Gynecology, Stanford University School of Medicine, 300 Pasteur Drive, Stanford, CA 94305-5118, USA [2]Division of Intramural Population Health Research, Eunice Kennedy Shriver National Institute of Child Health and Human Development, 6100 Executive Blvd., Room 7B03, Rockville, MD 20852, USA

The LIFE study is a population-based prospective cohort of 501 couples attempting to conceive in two geographic areas (Texas and Michigan,USA) recruited in 2005–2009

Table III Association of abnormal semen quality end-points with anthropometric measurements and physical activity.

Characteristic	Category	Volume <1.5 ml, *n* (%)	Concentration <15 M/ml, *n* (%)	Sperm count <39 M, *n* (%)	Vitality <58% *n* (%)	WHO normal morphology <30%, *n* (%)	Strict morphology < 4%, *n* (%)	DFI > 30%, *n* (%)
BMI (kg/m^2)	<25.0	8 (5.03)	9 (5.66)	9 (5.66)	25 (15.72)	36 (45.00)	2 (2.50)	6 (7.32)
	25.0–29.99	33 (9.59)	27 (7.85)	24 (6.98)	67 (19.48)	88 (49.44)	8 (4.49)	20 (10.47)
	30.0–34.99	19 (8.92)	17 (7.98)	17 (7.98)	40 (18.78)	51 (43.59)	4 (3.42)	7 (5.88)
	≥35.0	19 (15.20)	21 (16.80)	24 (19.20)	16 (13.11)	33 (54.10)	4 (6.56)	1 (1.49)
	P-trend*	0.033	0.028	0.005	0.791	0.549	0.252	0.035
Waist circumference (cm)	<93.99	19 (6.62)	17 (5.92)	16 (5.57)	53 (18.47)	65 (44.52)	5 (3.42)	9 (5.88)
	94.0–101.59	26 (11.35)	17 (7.42)	15 (6.55)	42 (18.34)	62 (50.82)	5 (4.10)	16 (12.70)
	≥101.6	34 (10.73)	38 (11.99)	41 (12.93)	48 (15.29)	79 (47.88)	8 (4.85)	9 (5.08)
	P-trend*	0.099	0.025	0.008	0.459	0.479	0.377	0.882
Vigorous weekly activity	<1	56 (11.64)	44 (9.15)	51 (10.60)	87 (18.16)	116 (46.03)	10 (3.97)	19 (7.17)
	≥1	23 (6.39)	30 (8.33)	23 (6.39)	61 (16.99)	92 (50.00)	8 (4.35)	15 (7.73)
	P-trend*	0.053	0.64	0.422	0.8	0.287	0.972	0.532

BMI

WC

Each semen end-point was dichotomized as normal/abnormal according to WHO standard.
Semen parameters dichotomized per WHO 5th edition.
*P-values of trend test based on linear models. In particular, linear mixed effects models were used for end-points measured in two semen samples, including volume, concentration, motility, total sperm count and vitality, while linear regression models were used for % WHO normal and the DFI. All models adjusted for age (≤24, 25–29, 30–34, ≥35 years), college education (yes/no) and serum cotinine (non-smoker/active smoker).

Eisenberg et al., Hum Reprod. 2014;29:193

ORIGINAL ARTICLE: ENVIRONMENT AND EPIDEMIOLOGY

ART outcomes

Men's body mass index in relation to embryo quality and clinical outcomes in couples undergoing in vitro fertilization

Daniela S. Colaci, M.D., M.Sc.,[a] Myriam Afeiche, Ph.D., M.P.H.,[a] Audrey J. Gaskins, B.S.E.,[a] Diane L. Wright, Ph.D.,[b] Thomas L. Toth, M.D.,[b] Cigdem Tanrikut, M.D.,[c] Russ Hauser, M.D., M.P.H., Sc.D.,[b,d,e] and Jorge E. Chavarro, M.D., Sc.D.[a,d,f]

[a] Department of Nutrition, Harvard School of Public Health, Harvard University; [b] Vincent Obstetrics and Gynecology, Massachusetts General Hospital and Harvard Medical School; [c] Department of Urology, Massachusetts General Hospital and Harvard Medical School; [d] Department of Epidemiology, Harvard School of Public Health; [e] Department of Environmental Health, Harvard School of Public Health; and [f] Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Harvard University, Boston, Massachusetts

Possible deleterious effect of male obesity among couples undergoing ICSI

114 couples who underwent 172 assisted reproduction cycles

Odds ratios (95% CI) for clinical outcomes in couples undergoing assisted reproduction according to fertilization method (conventional in vitro fertilization and intracytoplasmic sperm injection).

Clinical outcome	No. of cycles	Male BMI 18.5–24.99 kg/m^2	25–29.99 kg/m^2	≥30 kg/m^2	*P* trend
IVF cycles					
Clinical pregnancy per initiated cycle[a,b]	74	Ref	0.83 (0.34–2.06)	1.69 (0.52–5.46)	.38
Live birth per initiated cycle[a,b]	74	Ref	1.80 (0.58–5.65)	1.84 (0.48–7.06)	.35
Clinical pregnancy per embryo transfer[c,b]	72	Ref	0.92 (0.38–2.22)	1.54 (0.47–5.06)	.51
Live birth per embryo transfer[c,b]	72	Ref	1.81 (0.59–1.71)	1.63 (0.43–6.16)	.44
ICSI cycles					
Clinical pregnancy per initiated cycle[b,d]	91	Ref	0.57 (0.20–1.63)	0.62 (0.14–2.67)	.35
Live birth per initiated cycle[b,d]	91	Ref	0.40 (0.14–1.17)	0.20 (0.04–1.00)	.03[f]
Clinical pregnancy per embryo transfer[b,e]	86	Ref	0.53 (0.16–1.68)	0.53 (0.11–2.55)	.29
Live birth per embryo transfer[b,e]	86	Ref	0.40 (0.12–1.37)	0.16 (0.03–0.90)[f]	.04[f]

Note: BMI = body mass index; ICSI = intracytoplasmic sperm injection; IVF = in vitro fertilization; Ref = reference value.

[a] 53 Couples initiate an IVF cycle and underwent 74 IVF cycles.

[b] Odds ratio (95% CI) adjusted for men's age, women's age, day-3 FSH level, infertility diagnosis, stimulation protocol, and women's BMI.

[c] 52 couples underwent 72 embryo transfers among IVF cycles.

[d] 55 couples initiated an ICSI cycle and underwent 91 ICSI cycles.

[e] 52 couples underwent 86 embryo transfers among ICSI cycles.

[f] $P<.05$ compared with the reference group (men's BMI 19–24.99 kg/m^2).

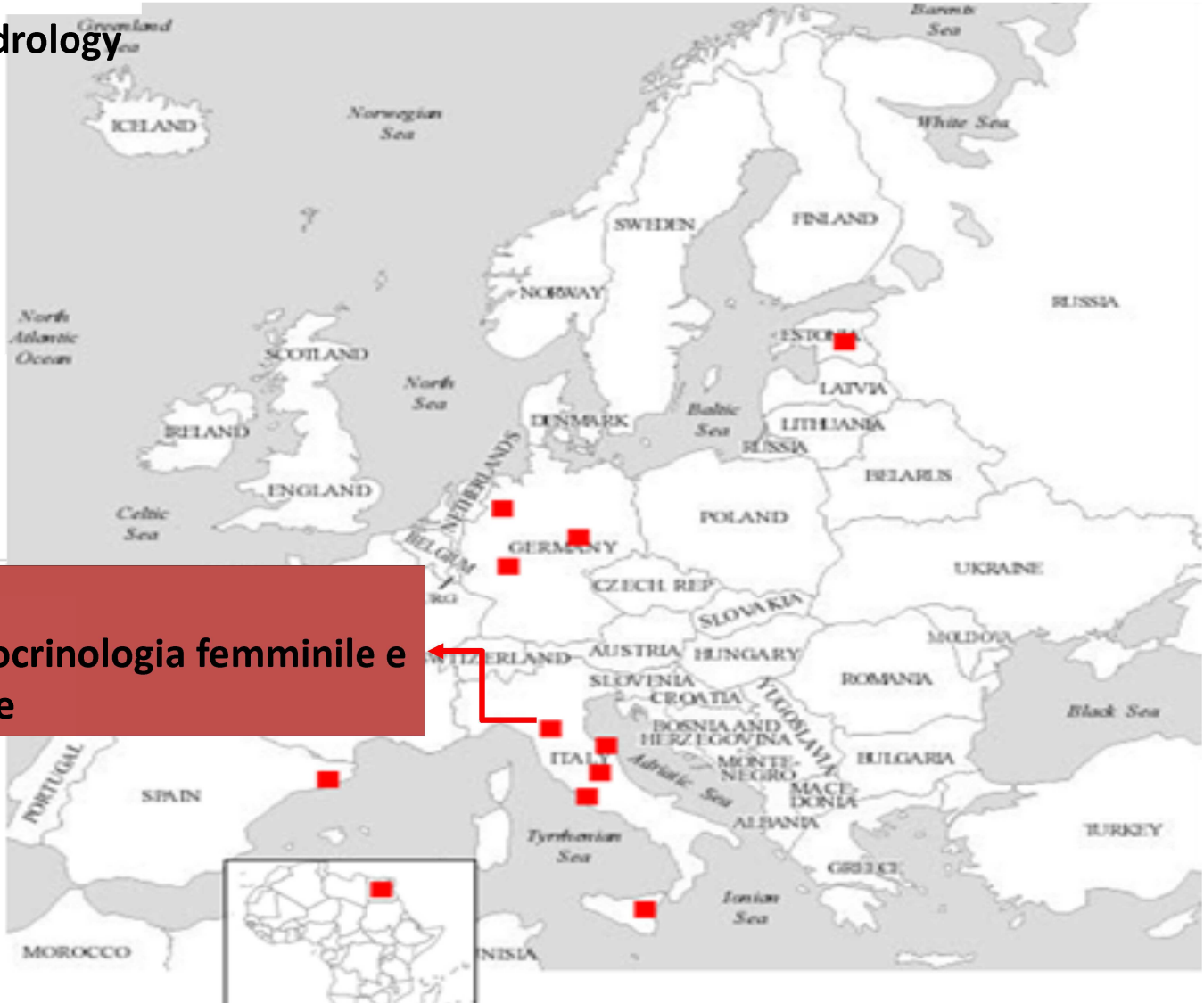
Colaci. Men's BMI and IVF outcomes. Fertil Steril 2012.

Colaci et al., Fertil Steril. 2012;98:1193

European Academy of Andrology

Azienda Ospedaliero Universitaria Careggi

Florence-AOU Careggi
SODc Andrologia, Endocrinologia femminile e Incongruenza di genere



European Academy of Andrology

Azienda Ospedaliero Universitaria Careggi

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ORIGINAL ARTICLE

ANDROLOGY WILEY

The European Academy of Andrology (EAA) ultrasound study on healthy, fertile men: clinical, seminal and biochemical characteristics

Francesco Lotti[1] | Francesca Frizza[1] | Giancarlo Balercia[2] | Arcangelo Barbonetti[3] | Hermann M. Behre[4] | Aldo E. Calogero[5] | Jann-Frederik Cremers[6] | Felice Francavilla[3] | Andrea M. Isidori[7] | Sabine Kliesch[6] | Sandro La Vignera[5] | Andrea Lenzi[7] | Marios Marcou[4] | Adrian Pilatz[8] | Olev Poolamets[9] | Margus Punab[9] | Maria Fernanda Peraza Godoy[10] | Osvaldo Rajmil[10] | Gianmaria Salvio[2] | Osama Shaeer[11] | Wolfgang Weidner[8] | Elisa Maseroli[1] | Sarah Cipriani[1] | Elisabetta Baldi[1] | Selene Degl'Innocenti[1] | Giovanna Danza[12] | Anna Lucia Caldini[13] | Alessandro Terreni[13] | Luca Boni[14] | Csilla Krausz[1] | Mario Maggi[12]

IL FATTORE MASCHILE PREDICE L'OUTCOME NELLA RIPRODUZIONE NATURALE

Predittori seminali, clinici e biochimici

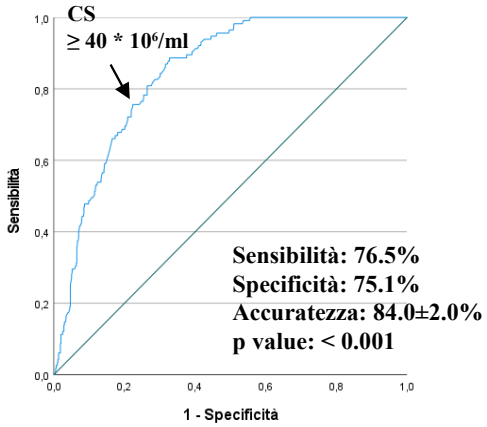
di gravidanza con figlio nato vivo

valutando un ampio numero di parametri

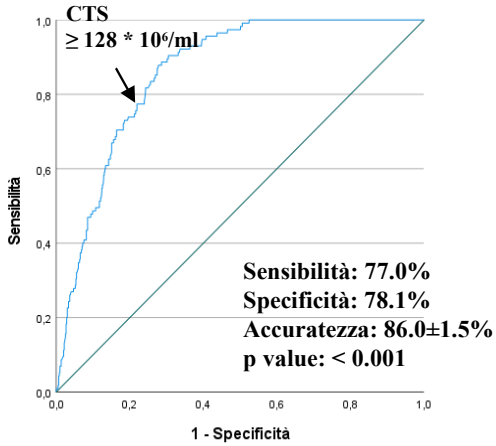
in maschi di coppie infertili e fertili con nato vivo

Alterazione dei parametri del liquido seminale e degli spermatozoi predice la gravidanza con «neonato in braccio»

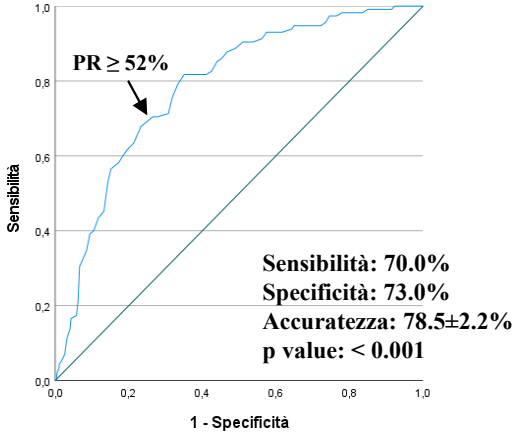
A Curva ROC per concentrazione spermatica (CS) predittiva di gravidanza con nato vivo



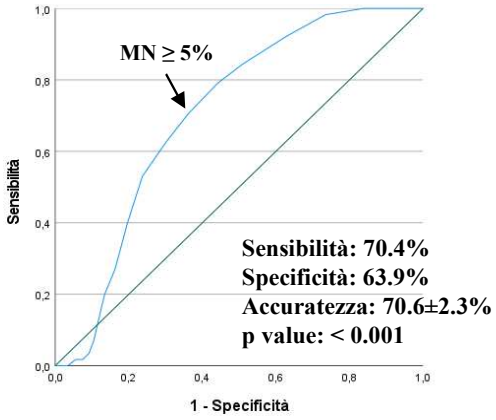
B Curva ROC per conta totale spermatica (CTS) predittiva di gravidanza con nato vivo



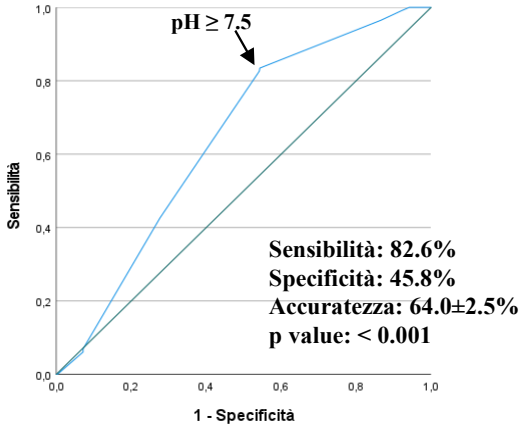
C Curva ROC per motilità progressiva (PR) predittiva di gravidanza con nato vivo



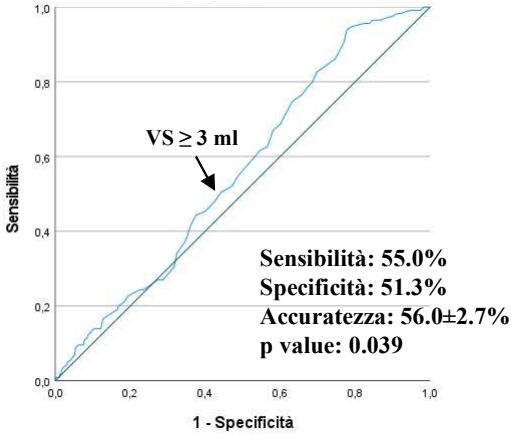
D Curva ROC per morfologia normale (MN) predittiva di gravidanza con nato vivo

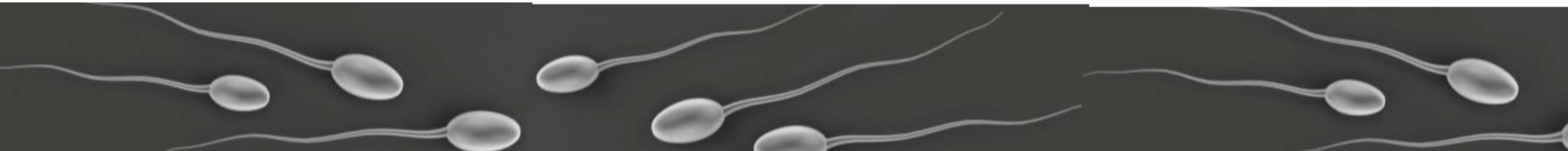


E Curva ROC per pH seminale predittiva di gravidanza con nato vivo



F Curva ROC per volume seminale predittiva di gravidanza con nato vivo





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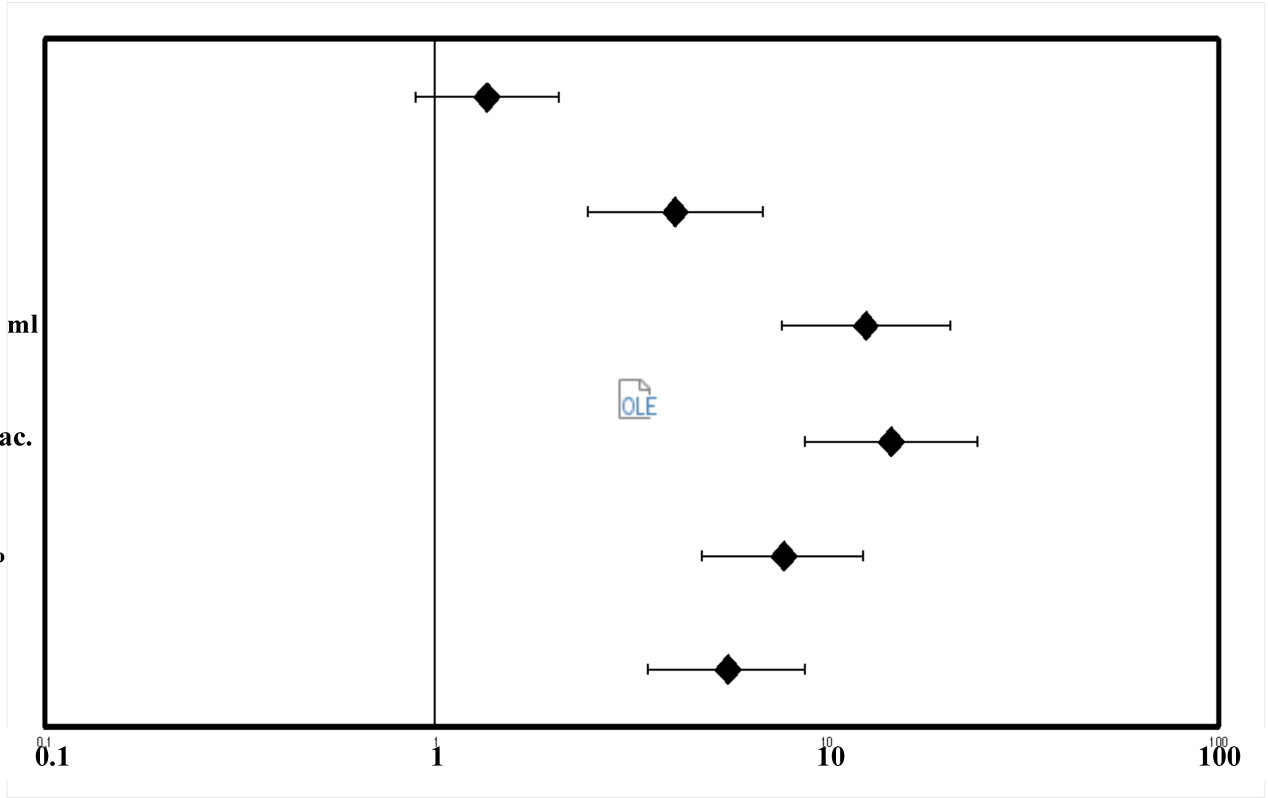
Soglie relative ai parametri seminali e probabilità di gravidanza con «neonato in braccio»

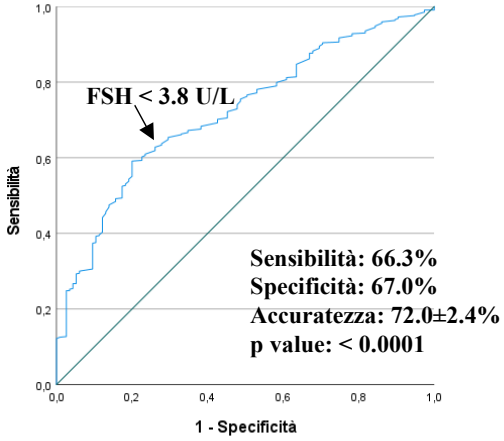


Dati corretti per età del maschio e della partner

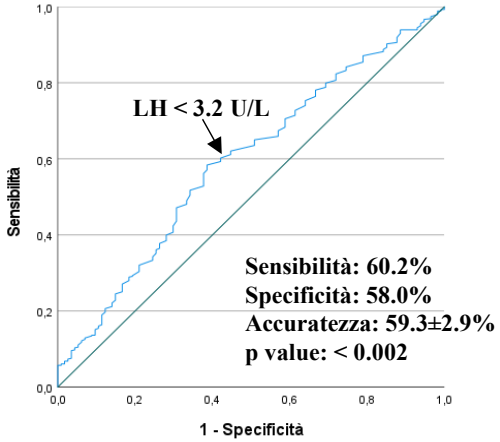
Azienda Ospedaliero Universitaria Careggi

Nuovi PARAMETRI in grado di PREDIRE LA FERTILITA' NATURALE CON «NEONATI IN BRACCIO»

A Curva ROC per FSH
Predittiva per gravidanza con nato vivo

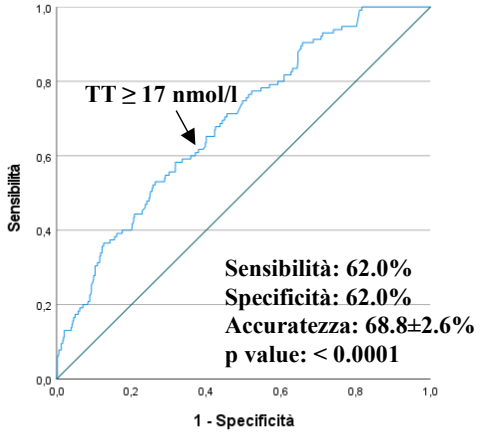


B Curva ROC per LH
predittiva di gravidanza con nato vivo

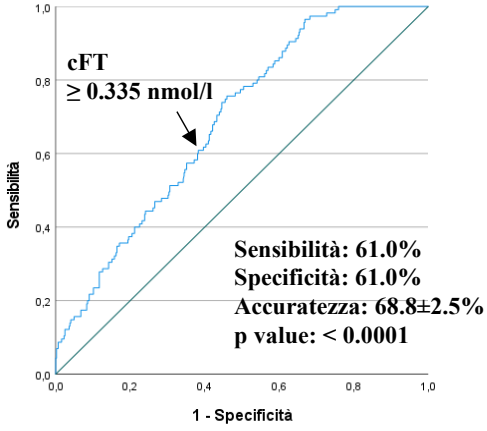


VALORI ORMONALI

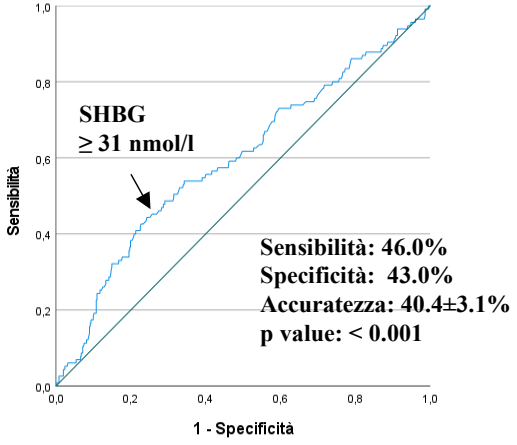
C Curva ROC per testosterone totale (TT)
predittiva di gravidanza con nato vivo



D Curva ROC per T libero calcolato (cFT)
predittiva di gravidanza con nato vivo



E Curva ROC per SHBG
predittiva di gravidanza con nato vivo



Azienda Ospedaliero Universitaria Careggi

Soglie relative ai VALORI ORMONALI e probabilità di gravidanza naturale con «neonato in braccio»

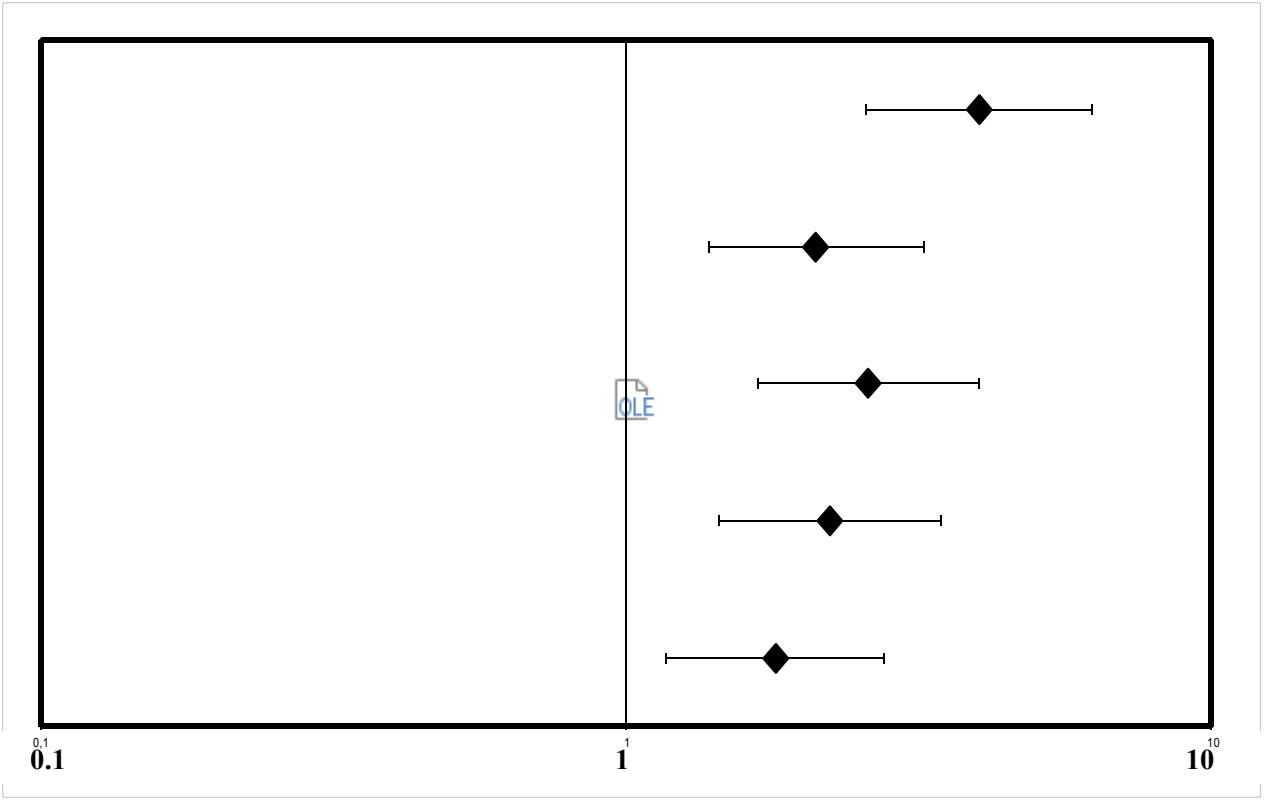
FSH < 3.8 U/L

LH < 3.2 U/L

TT ≥ 17 nmol /l

cFT ≥ 0.335 nmol /l

SHBG ≥ 31 nmol /l



OR per gravidanza con nato vivo

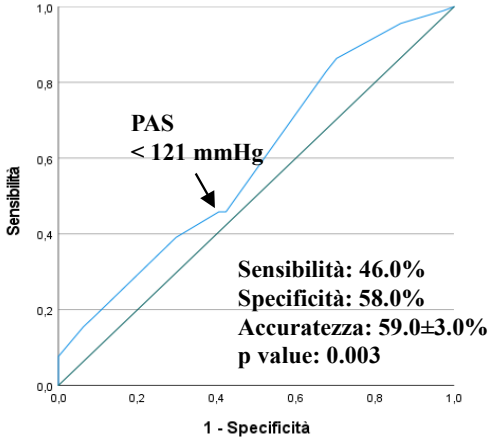
Dati corretti per età del maschio e della partner

Azienda Ospedaliero Universitaria Careggi

Nuovi PARAMETRI in grado di PREDIRE LA FERTILITA' NATURALE CON «NEONATI IN BRACCIO»

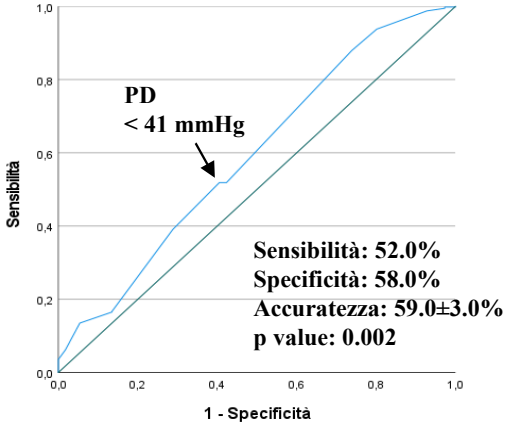
A

Curva ROC per PA sistolica (PAS) predittiva di gravidanza con nato vivo



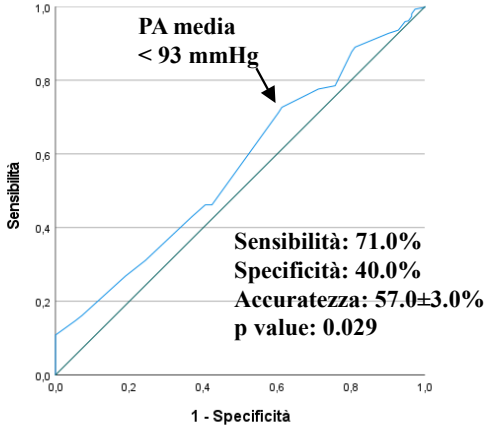
B

Curva ROC per Pressione Differenziale (PD) predittiva di gravidanza con nato vivo



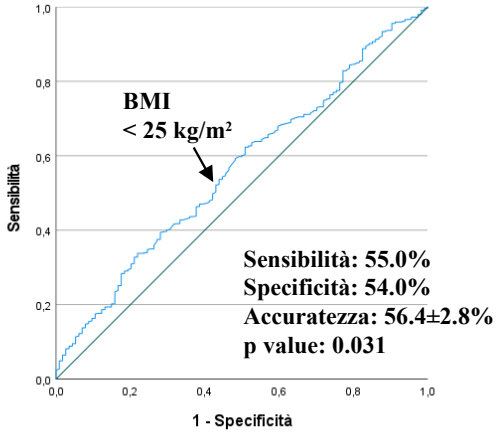
C

Curva ROC per PA media predittiva di gravidanza con nato vivo



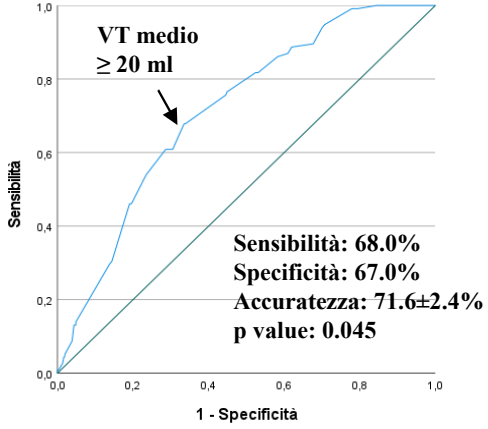
D

Curva ROC per BMI predittiva di gravidanza con nato vivo



E

Curva ROC per volume testicolare (VT) predittiva di gravidanza con nato vivo



LA VISITA ANDROLOGICA

Azienda Ospedaliero Universitaria Careggi

Soglie relative ai PARAMETRI CLINICI della visita Andrologica e probabilità di gravidanza naturale con «neonato in braccio»

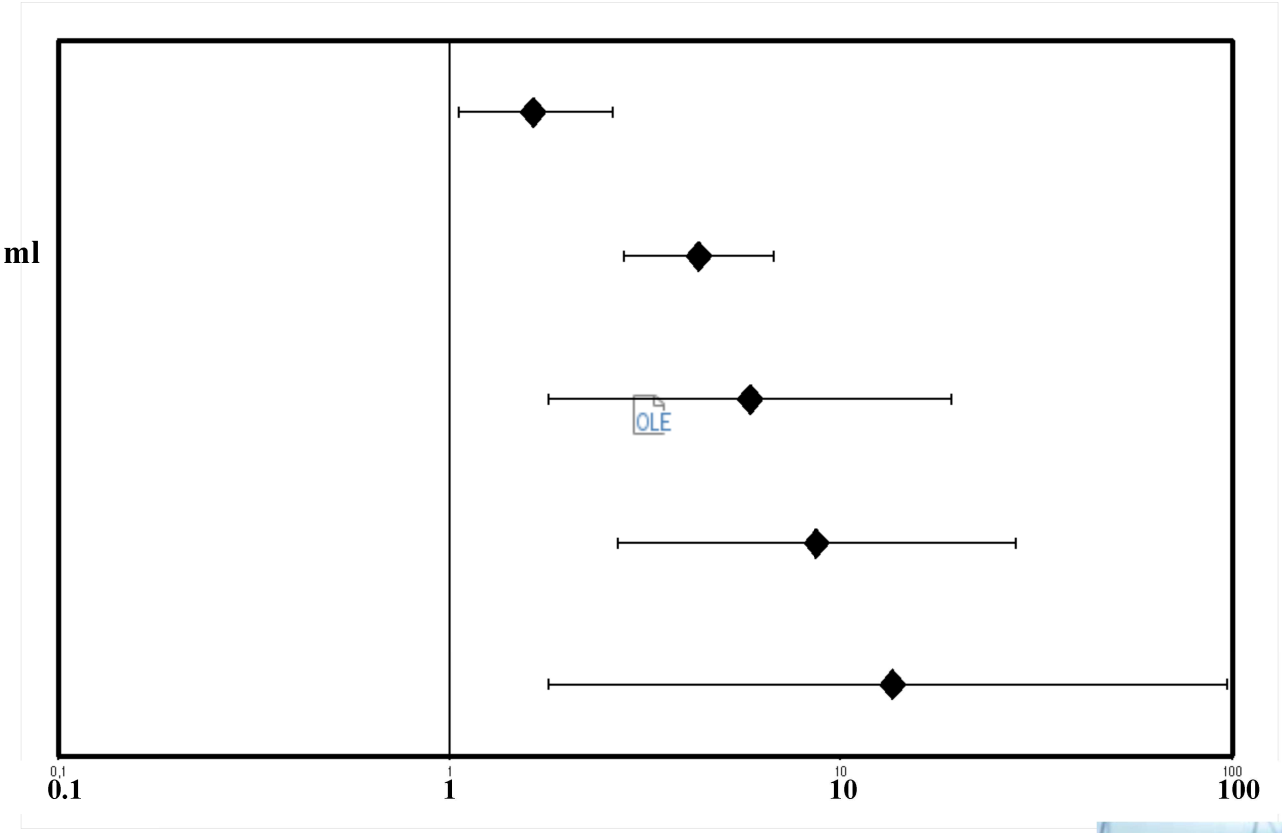
PA media < 93 mmHg

Volume testicolare medio ≥ 20 ml

Caput epididimo non dilatato

Cauda epididimo non dilatata

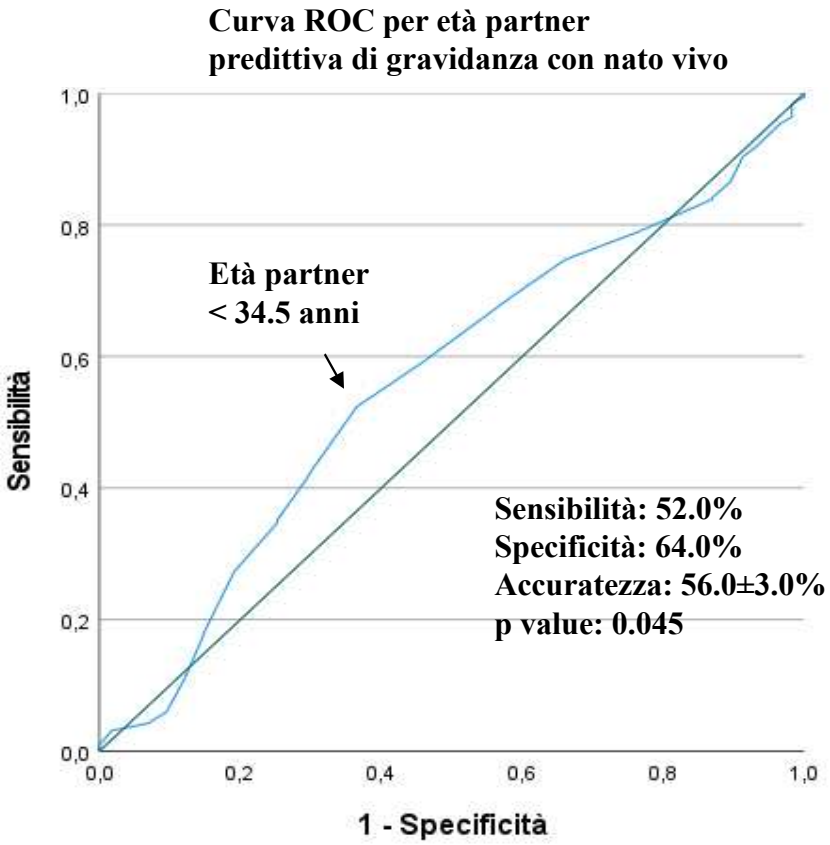
Assenza di agenesia bilaterale deferenti



Dati corretti per età del maschio e della partner

Azienda Ospedaliero Universitaria Careggi

Curve ROC – età partner



Azienda Ospedaliero Universitaria Careggi

Soglie relative ai parametri clinici e Probabilita' di gravidanza naturale con neonato in braccio

età partner, anamnesi, questionari psicologici e andrologici

Età partner < 34.5 anni

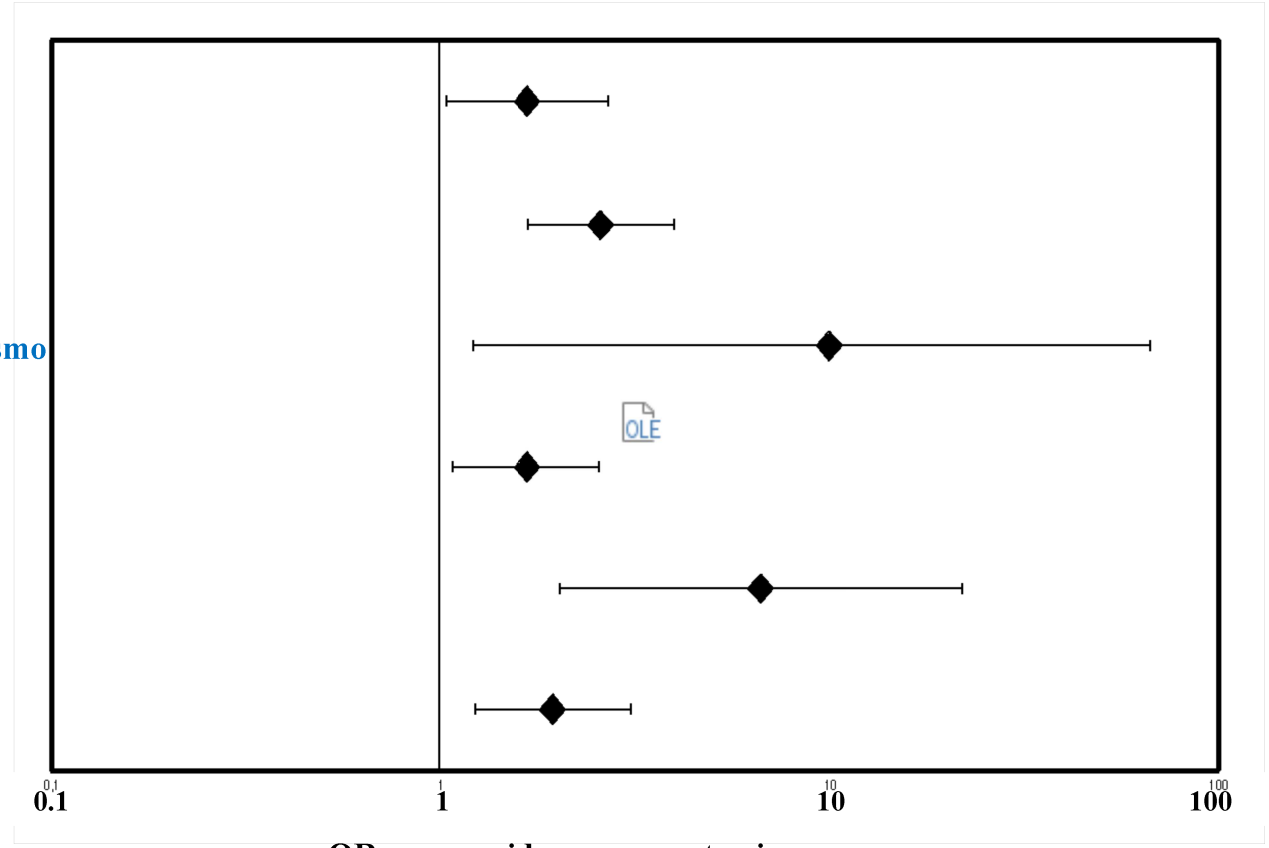
Consumo di alcol lieve

Assenza di storia di criptorchidismo

Assenza di storia di parotite

Assenza di disfunzione erettile

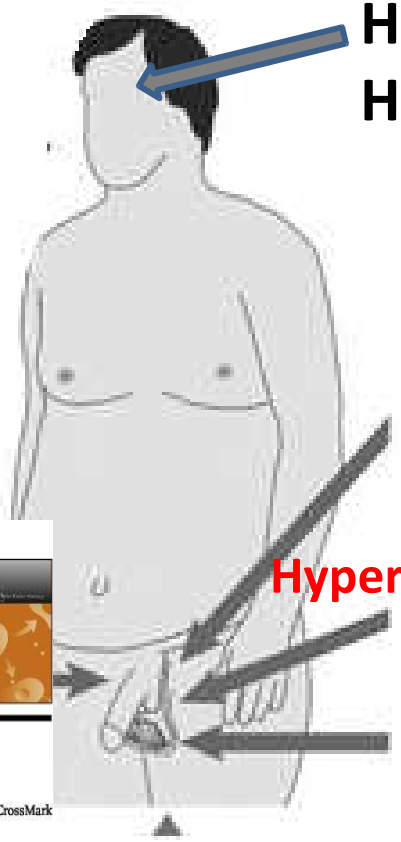
Punteggio totale MHQ ≤ 20



OR per gravidanza con nato vivo

Dati corretti per età del maschio e della partner

WHAT ABOUT THE THERAPEUTIC STRATEGIES?



Hypogonadotropic Hypogonadism

Erectile dysfunction

Hyperestrogenism **Inflammation**

Sperm alterations

Molecular and Cellular Endocrinology 401 (2015) 12–24

Contents lists available at ScienceDirect

Molecular and Cellular Endocrinology

journal homepage: www.elsevier.com/locate/mce

Metabolic syndrome-associated sperm alterations in an experimental rabbit model: Relation with metabolic profile, testis and epididymis gene expression and effect of tamoxifen treatment

Sara Marchiani [a], Linda Vignozzi [a], Sandra Filippi [b], Bruna Gurrieri [a], Paolo Comeglio [a], Annamaria Morelli [c], Giovanna Danza [d], Gianluca Bartolucci [e], Mario Maggi [a], Elisabetta Baldi [a,*]

ISSN: 2047-2919

ANDROLOGY

WHAT ABOUT THE THERAPEUTIC STRATEGIES?

ORIGINAL ARTICLE

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Keywords:
clomiphene citrate, empiric medical therapy, idiopathic male infertility, meta-analysis, oestrogen antagonists, pregnancy rate, tamoxifen citrate

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Accepted: 24-May-2013

doi: 10.1111/j.2047-2927.2013.00107.x

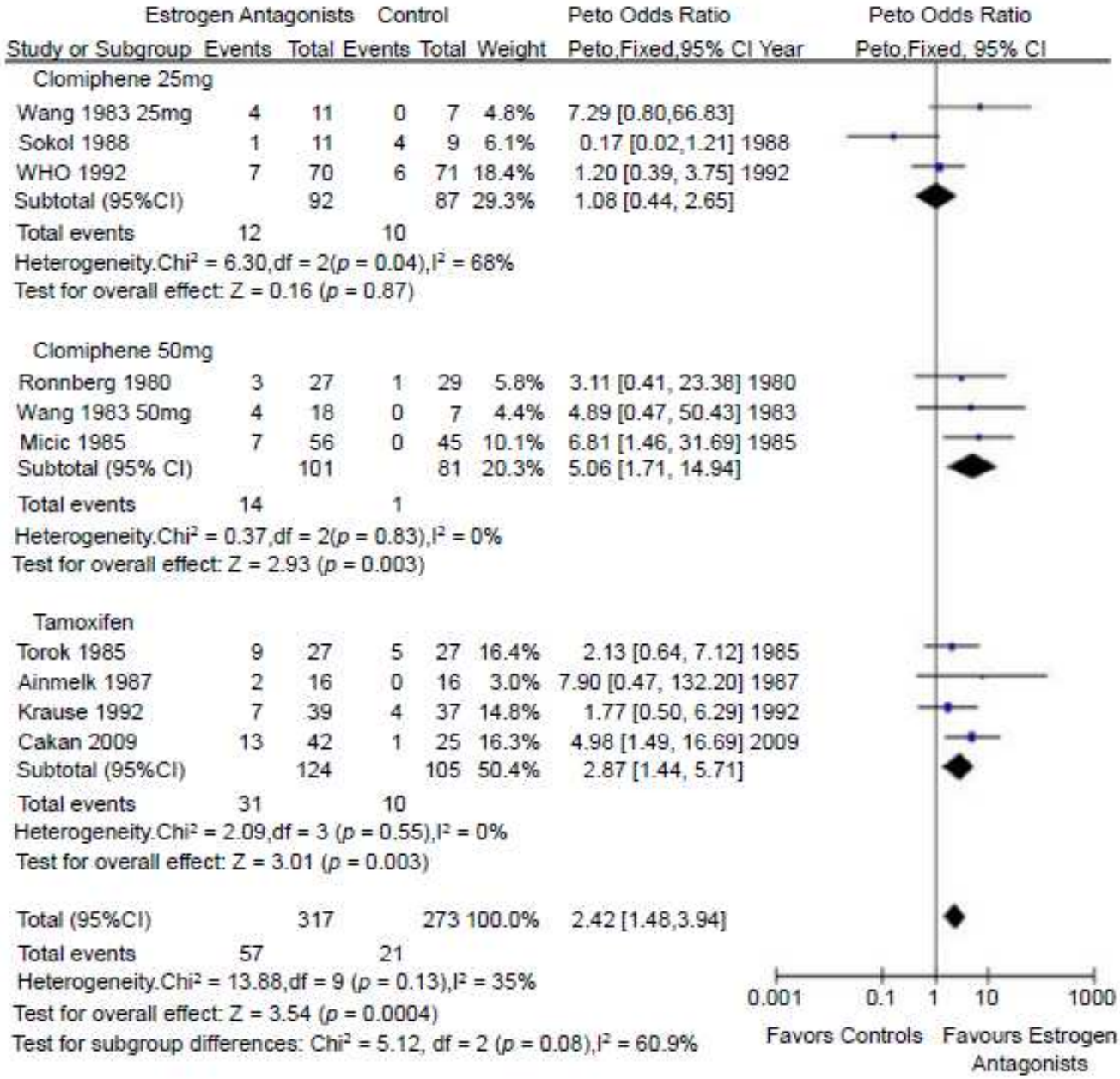
Revisiting oestrogen antagonists (clomiphene or tamoxifen) as medical empiric therapy for idiopathic male infertility: a meta-analysis

[1,2]M. E. Chua, [3]K. G. Escusa, [1]S. Luna, [3]L. C. Tapia, [4,5]B. Dofitas and [1,6]M. Morales

[1]Institute of Urology, St. Luke's Medical Center, Quezon City, Philippines, [2]Research and Biotechnology Division, St. Luke's Medical Center, Quezon City, Philippines, [3]Department of Preventive and Community Medicine, St. Luke's College of Medicine, Quezon City, Philippines, [4]Section of Dermatology, St. Luke's College of Medicine, Quezon City, Philippines, [5]Section of Dermatology, Philippine General Hospital, Manila City, Philippines, and [6]Department of Urology, National Kidney and Transplant Institute, Quezon City, Philippines

Chua et al., Andrology. 2013;1:749

Pregnancy rate per couple randomized



Chua et al., Andrology. 2013;1:749

Outcomes of anastrozole in oligozoospermic hypoandrogenic subfertile men

Ohad Shoshany, M.D.,[a] Nikita Abhyankar, M.D.,[a] Naem Mufarreh, M.S.,[b] Garvey Daniel, M.D.,[a] and Craig Niederberger, M.D.[a]

[a] Department of Urology, University of Illinois at Chicago, Chicago; and [b] Loyola University, Chicago, Illinois

TABLE 2

Semen parameters in 21 men with hypoandrogenism and oligozoospermia treated with anastrozole.

	Baseline		At 4 mo		
Parameter	**Mean ± SE**	**Median (IQR)**	**Mean ± SE**	**Median (IQR)**	***P* value**
Volume (mL)	2.56 ± 0.22	2.5 (1.7–3.3)	2.32 ± 0.25	2.2 (1.6–3)	NS
Concentration ($\times 10^6$/mL)	4.7 ± 1.2	2 (1.5–7.3)	13.1 ± 2.9	7 (4.4–19.5)	.001
Motility (%)	39.9 ± 5	41.5 (24–55)	40.5 ± 4.8	38.5 (29–54)	NS
Total motile count ($\times 10^6$)	4.6 ± 1.3	2.8 (0.7–6.6)	8 ± 3.4	8.1 (3.3–12.1)	< .01

Note: Values are mean ± SE or median (interquartile range).

Shoshany. Anastrozole for subfertile men. Fertil Steril 2016.

TABLE 3

Correlation of total motile count percentage change with hormonal parameters in a subgroup of 21 men with hypoandrogenism and oligozoospermia.

	Linear regression			Age- and FSH-adjusted linear regression		
Predictor	**Regression coefficient (95% CI)**	**Adjusted R^2**	***P* value**	**Regression coefficient (95% CI)**	**Adjusted R^2**	***P* value**
Pretreatment total T	1.48 (−1.67, 4.63)	−0.002	NS			
Pretreatment BT	2.94 (−3.35, 9.22)	−0.002	NS			
Pretreatment E_2	−1.9 (−19, 15.2)	−0.052	NS			
Posttreatment total T	0.15 (−1.39, 1.69)	−0.053	NS			
Posttreatment BT	0.28 (−3.18, 3.75)	−0.069	NS			
Posttreatment E_2	−4.13 (−14.1, 5.87)	−0.014	NS			
Change in total T	−0.18 (−1.67, 1.31)	−0.052	NS			
Change in total BT	−0.48 (−3.84, 2.89)	−0.064	NS			
Pretreatment T/E_2 ratio	19.8 (−60.5, 100.2)	−0.04	NS			
Posttreatment T/E_2 ratio	14.3 (8.8, 19.8)	0.618	< .0001	14.5 (7.9, 21.1)	0.598	< .0001
Absolute change in T/E_2 ratio	13.8 (8.15, 19.5)	0.586	< .0001	14.2 (7.5, 21)	0.578	< .0001
% Change in T/E_2 ratio	0.8 (0.35, 1.25)	0.419	< .01	0.77 (0.22, 1.31)	0.374	< .01

Note: BT = bioavailable T; CI = confidence interval.

Shoshany. Anastrozole for subfertile men. Fertil Steril 2016.

TREATMENT of HYPOGONADOTROPIC HYPOGONADISM

Goal: IMPROVEMENT OF SEMEN QUALITY

Gonadotropins

- **HCG**
- **HCG + FSH**
- **HCG & FSH**

ANDROLOGY

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ANDROLOGY

REVIEW ARTICLE

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Keywords:
gonadotrophins, hypogonadism, sperm count, sperm quality parameters, spermatogenesis

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doi: 10.1111/andr.262

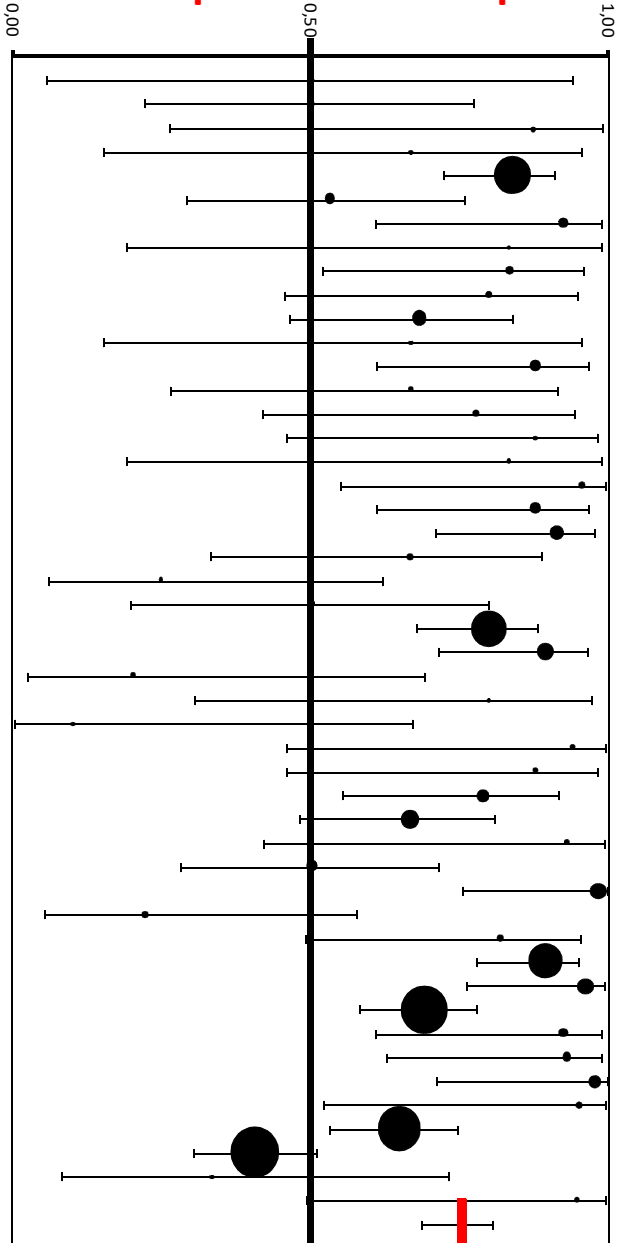
Factors affecting spermatogenesis upon gonadotropin-replacement therapy: a meta-analytic study

[1]G. Rastrelli, [1,2]G. Corona, [3]E. Mannucci and [1]M. Maggi

[1]Experimental and Clinical Biomedical Sciences, University of Florence, Florence, Italy, [2]Endocrinolgy Unit, Maggiore Hospital, Bologna, Italy, and [3]Critical Care, University of Florence, Florence, Italy

Rastrelli et al., Andrology. 2014 Nov;2(6):794-808. doi: 10.1111/andr.262.

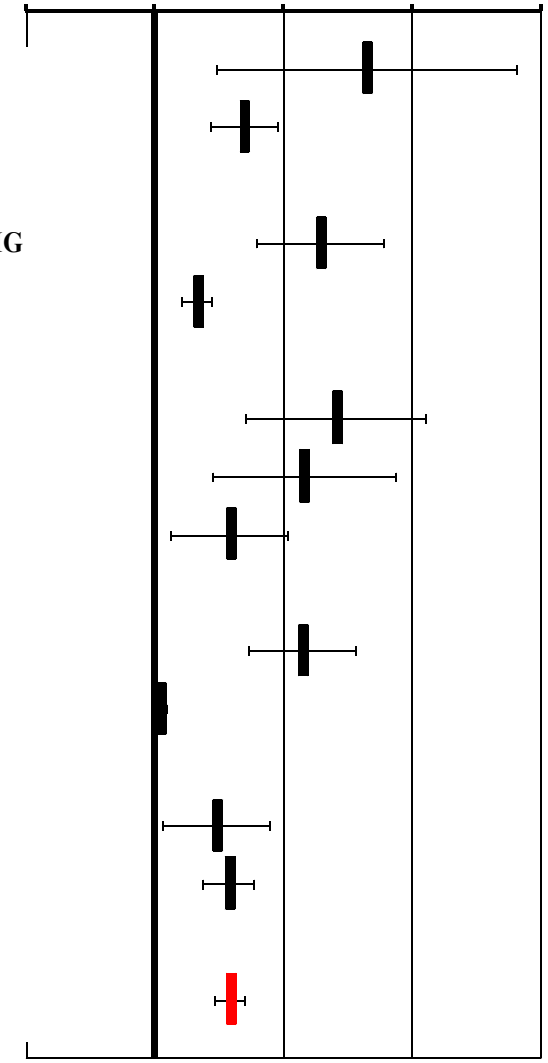
Cumulative rates (with 95% confidence interval) of appearance of at least one spermatozoa in the semen upon Gonadotropins therapy



Study	Event Rate	LL	UL	P
Scherman et al., 1964	0.50	0.06	0.94	1.000
Gayral et al., 1975	0.50	0.22	0.78	1.000
Levalle et al., 1983	0.88	0.27	0.99	0.198
D'Agata et al., 1984	0.67	0.15	0.96	0.571
Burger et al., 1984	0.84	0.73	0.91	0.000
Gattuccio et al., 1984	0.53	0.29	0.76	0.796
Ley and Leonard 1985	0.92	0.61	0.99	0.017
Abbaticchio et al., 1985	0.83	0.19	0.99	0.299
Okuyama et al., 1986	0.83	0.52	0.96	0.038
Liu et al., 1988	0.80	0.46	0.95	0.080
Burris et al., 1988	0.68	0.47	0.84	0.096
Burger et al., 1990	0.67	0.15	0.96	0.571
Saal et al., 1991	0.88	0.61	0.97	0.010
Schopohl et al., 1991	0.67	0.27	0.92	0.423
Vicari et al., 1992 hCG	0.78	0.42	0.94	0.118
Vicari et al., 1992 hCG+FSH	0.88	0.46	0.98	0.069
Lenzi et al., 1993	0.83	0.19	0.99	0.299
Schaison et al., 1993	0.95	0.55	1.00	0.035
Kung et al., 1994	0.88	0.61	0.97	0.010
Kliesch et al., 1994	0.91	0.71	0.98	0.001
Kirk et al., 1993	0.67	0.33	0.89	0.327
Fuse et al., 1996 hCG	0.25	0.06	0.62	0.178
Fuse et al., 1996 hCG+FSH	0.50	0.20	0.80	1.000
Burgues et al., 1997	0.80	0.68	0.88	0.000
European Metrodin HP study group 1998	0.89	0.72	0.97	0.001
Tachiki et al., 1998 hCG	0.20	0.03	0.69	0.215
Tachiki et al., 1998 hCG+FSH	0.80	0.31	0.97	0.215
Giagulli 1999	0.10	0.01	0.67	0.140
Carani et al., 1999	0.94	0.46	1.00	0.064
Liu et al., 1999	0.88	0.46	0.98	0.069
Bouloux et al., 2002	0.79	0.55	0.92	0.019
Bouloux et al., 2003	0.67	0.48	0.81	0.074
Zorn et al., 2004	0.93	0.42	1.00	0.081
Miyagawa et al., 2005	0.50	0.28	0.72	1.000
Bakircioglu et al., 2007	0.98	0.76	1.00	0.006
Sinisi et al., 2008 hCG	0.22	0.06	0.58	0.118
Sinisi et al., 2008 hCG+FSH	0.82	0.49	0.95	0.054
Homayoun et al., 2008	0.89	0.78	0.95	0.000
Matsumoto et al., 2009	0.96	0.76	0.99	0.002
Warne et al., 2009	0.69	0.58	0.78	0.001
Oldereid et al., 2010	0.92	0.61	0.99	0.017
Sinisi et al 2010 hpFSH	0.93	0.63	0.99	0.013
Sinisi et al., 2010 rFSH	0.98	0.71	1.00	0.009
Milsom et al., 2012	0.95	0.53	1.00	0.042
Yang et al., 2012 hCG+FSH	0.65	0.53	0.75	0.012
Yang et al., 2012 hCG	0.40	0.31	0.51	0.083
Zacharin et al.,2012 hCG	0.33	0.08	0.73	0.423
Zacharin et al.,2012 hCG+FSH	0.94	0.50	1.00	0.052
OVERALL	**0.75**	**0.69**	**0.81**	**0.000**

Rastrelli et al., Andrology. 2014 Nov;2(6):794-808. doi: 10.1111/andr.262.

Cumulative mean sperm concentration achieved (with 95% confidence interval) upon gonadotropin therapy, overall and according to different possible predictors.

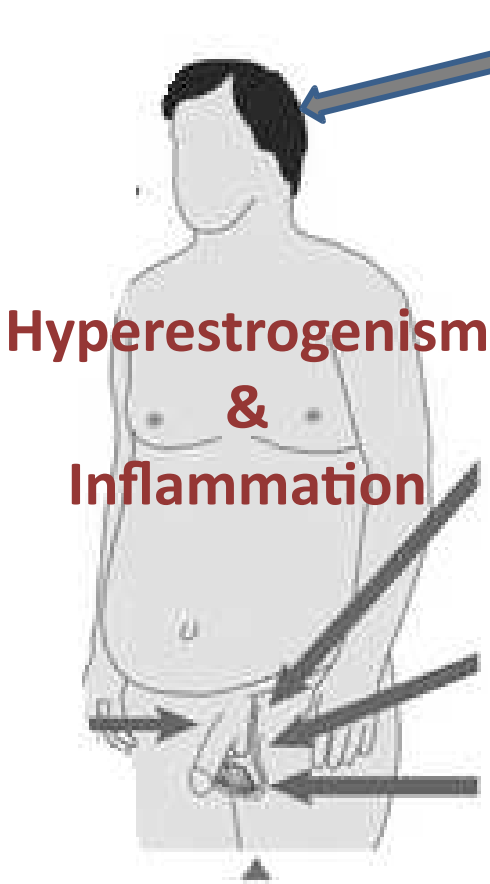


	# Studies	# Subjects	End point means (million/mL)	LL	UL	
Pituitary related HHG	6	20	16.54	4.82	28.26	Q=2.431
Hypothalamic related HHG	20	190	6.99	4.37	9.60	p=0.111
Mixed pre- and post -pubertal onset HHG	3	47	12.94	8.00	17.88	Q=13.715
Only pre pubertal onset of HHG	17	158	3.37	2.25	4.49	P<0.0001
Urinary-derived FSH	12	105	14.19	7.20	21.19	Q=4.393
Purified FSH	2	30	11.71	4.62	18.79	p=0.111
Recombinant FSH	5	88	5.96	1.41	10.51	
hCG+FSH	19	225	11.57	7.46	15.68	Q=27.503
Only hCG	8	65	0.47	-0.12	1.05	P<0.0001
No previous TRT (0% of previously treated subjects)	5	42	4.88	0.72	9.03	Q=0.166
Previous TRT (at least 1 previously treated subject)	15	195	5.84	3.84	7.83	p=0.684
OVERALL	**30**	**317**	**5.92**	**4.72**	**7.13**	

Rastrelli et al., Andrology. 2014 Nov;2(6):794-808. doi: 10.1111/andr.262.

remarks:

Metabolic syndrome is characterized by several reproductive alterations:



Hypogonadotropic Hypogonadism

Hyperestrogenism & Inflammation

Erectile dysfunction

Male accessory Gland inflammation

Sperm alterations

Final remarks

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