

EAA Andrology Training Centre  
Centre Report

**2025**

## **Centre identification**

Division of Endocrinology

Polytechnic University of Marche

Department of clinical and molecular sciences

Azienda Ospedaliera Universitaria delle Marche Via Conca 71 60126, Ancona, Italy

[https://ospedaliriuniti.etrasparenza2.it/archivio13\\_strutture\\_-1\\_8083.html](https://ospedaliriuniti.etrasparenza2.it/archivio13_strutture_-1_8083.html)

## **CENTRE REPORT**

### **History of Centre**

The history of andrology at Clinic of Endocrinology of Polytechnic University of Marche starts in 1995 with G. Balercia, whose activity of clinical care and research was initially under the direction of M. Boscaro.

From the first years of activity, our Centre showed strong interest in research of pathophysiology of fertility, especially for the effects of oxidative stress and the protective action of coenzyme Q on male fertility. A special attention was also paid to cytogenetics of male infertility (chromosome Y microdeletions, gene polymorphisms).

Later, the andrological ambulatory gained continuous experience in diagnostic and treatment of male sexual health problems (i.e. erectile dysfunction) and in 2002 Prof. Balercia was awarded as 'academicina' by the European Academy of Andrology.

Our Center is awarded as Training Centre in Andrology of the European Academy of Andrology from 2006.

Currently, the Centre is still directed by G. Balercia, who is also the Director of the Division of Endocrinology of the Polytechnic University of Marche (Azienda Ospedaliero Universitaria delle Marche) from 2013.

## History of Centre

*The history of andrology at Clinic of Endocrinology of Polytechnic University of Marche starts in 1995 with G. Balercia, whose activity of clinical care and research was initially under the direction of M. Boscaro.*

*From the first years of activity, our Centre showed strong interest in research of pathophysiology of fertility, especially for the effects of oxidative stress and the protective action of coenzyme Q on male fertility. A special attention was also paid to cytogenetics of male infertility (chromosome Y microdeletions, gene polymorphisms).*

*Later, the andrological ambulatory gained continuous experience in diagnostic and treatment of male sexual health problems (i.e. erectile dysfunction) and in 2002 Prof. Balercia was awarded as 'academician' by the European Academy of Andrology.*

*Our Center is awarded as Training Centre in Andrology of the European Academy of Andrology from 2006.*

*Currently, the Centre is still directed by G. Balercia, who is also the Director of the Division of Endocrinology of the Polytechnic University of Marche (Azienda Ospedaliero Universitaria delle Marche) from 2013.*

---

## Organization of Centre

---

**Unit Name**  
 Division of Endocrinology  
 Polytechnic University of Marche  
 Department of clinical and molecular sciences  
 AOU delle Marche

**Director:**  
 Prof. Giancarlo Balercia

**Staff (Physicians)**  
 Prof. Gilberta Giacchetti  
 Dr. Maurizio Cignitti  
 Dr. Lara Giovannini  
 Dr. Gianmaria Salvio  
 Dr. Alessandro Ciarloni  
 Dr. Michele Perrone  
 Dr. Nicola Ambo  
 Dr. Silvia Rossi  
 Dr. Valentina Di Giacomi  
**Staff (Laboratory)**  
 Nicola Delli Muti  
 Sara Sacco  
 Vignini Arianna

**Clinical Services**  
 Outpatient Clinics for sexual medicine, couple infertility, sexual dysfunction,  
 Scrotal, penile arteries and prostate ultrasound  
 IUI Embryo transfer  
 FNA / TESE  
 IUI

Diagnosis of infertility  
 Counseling of infertile couple  
 Ultrasound of male genital tract  
 Semen analysis  
 Microdeletions of Y chromosome

---

## Educational activities

---

---

The Clinic is associated to the School of Endocrinology of the Polytechnic University of Marche for postgraduated in Medicine.

---

### **Research activities**

---

Clinical research in hypogonadism, erectile dysfunction and male infertility

Clinical trials:

- CAH3003: A Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Safety and Efficacy of Crinercerfont (NBI-74788) in Adult Subjects with Classic Congenital Adrenal Hyperplasia, Followed by Open-Label Treatment
- 

### **Clinical activities**

---

Outpatients andrology activity

Hospitalization availability

Basic and advanced seminology laboratory (including ultrastructural analysis facility)

Molecular biology laboratory (Y-chromosome microdeletions analysis)

Diagnostic tools for erectile dysfunction

Sexological counselling

---

**Name and address of Centre**

Medical Andrology - Clinic of Endocrinology - Dept of Clinical and Molecular Sciences,  
 Polytechnic University of Marche, Azienda Ospedaliero Universitaria delle Marche, Ancona,  
 Italy. Ph: +39.071.5963738 Fax: +39.071.887.300  
 E.mail: andrologia@ospedaliriuniti.marche.it

**Type of Centre**

University	<input type="checkbox"/>
University Hospital	<input checked="" type="checkbox"/>
Private Centre	<input type="checkbox"/>

Other (please  
specify)

---

**1. Director**

Prof. Giancarlo Balercia

Academician  Regular Member  EAA Certified Clin. Andrologist

**2a. Clinical responsible**

Academician  Regular Member  EAA Certified Clin. Andrologist

**2b. Clinical responsible**

Academician  Regular Member  EAA Certified Clin. Andrologist

**2c. Clinical responsible**

Academician  Regular Member  EAA Certified Clin. Andrologist

**3. Present Staff** (*Senior Scientists*)

1) Name Giancarlo Balercia  
 Degree Medical Head, Full professor  
 Speciality Endocrinology

Academician  Regular Member  EAA Certified Clin. Andrologist

2) Name Maurizio Cignitti  
 Degree Medical Head, MD  
 Speciality Obstetrics and Gynecology

Academician  Regular Member  EAA Certified Clin. Andrologist

3) Name Gianmaria Salvio  
 Degree Medical Head, Assistant Professor  
 Speciality Endocrinology

Academician  Regular Member  EAA Certified Clin. Andrologist

4) Name Gilberta Giacchetti  
 Degree Medical Head, Assistant Professor  
 Speciality Endocrinology

Academician  Regular Member  EAA Certified Clin. Andrologist

**Insert any additional staff below** (*if required*)

## MD/Biologists/Chemists

1) Name Nicola Delli Muti  
 Degree Biologist, PhD  
 Speciality Biology  
 Full time/part time Full time

Academician  Regular Member  EAA Certified Clin. Andrologist

2) Name Lara Giovannini  
 Degree MD  
 Speciality Endocrinology  
 Full time/part time Full time

Academician  Regular Member  EAA Certified Clin. Andrologist

3) Name Alessandro Ciarloni  
 Degree MD

Speciality Endocrinology  
Full time/part time Part time

Academician  Regular Member  EAA Certified Clin. Andrologist

4) Name Silvia Rossi  
Degree MD  
Speciality Endocrinology  
Full time/part time Part time

Academician  Regular Member  EAA Certified Clin. Andrologist

5) Name Sara Sacco  
Degree PhD  
Speciality Biologist  
Full time/part time Full time

Academician  Regular Member  EAA Certified Clin. Andrologist

6) Name Nicola Ambo  
 Degree MD  
 Speciality Endocrinology  
 Full time/part time Part time

Academician  Regular Member  EAA Certified Clin. Andrologist

7) Name Valentina Di Giacomi  
 Degree MD  
 Speciality Endocrinology  
 Full time/part time Part time

Academician  Regular Member  EAA Certified Clin. Andrologist

8) Name Michele Perrone  
 Degree MD  
 Speciality Endocrinology  
 Full time/part time Part time

Academician  Regular Member  EAA Certified Clin. Andrologist

9) Name \_\_\_\_\_  
 Degree \_\_\_\_\_  
 Speciality \_\_\_\_\_  
 Full time/part time \_\_\_\_\_

Academician  Regular Member  EAA Certified Clin. Andrologist

10) Name \_\_\_\_\_  
 Degree \_\_\_\_\_  
 Speciality \_\_\_\_\_  
 Full time/part time \_\_\_\_\_

Academician  Regular Member  EAA Certified Clin. Andrologist

11) Name \_\_\_\_\_  
 Degree \_\_\_\_\_  
 Speciality \_\_\_\_\_  
 Full time/part time \_\_\_\_\_

Insert any additional staff below *(if required)*

## Specialists

- 1) Name \_\_\_\_\_
- 2) Name \_\_\_\_\_
- 3) Name \_\_\_\_\_
- 4) Name \_\_\_\_\_
- 5) Name \_\_\_\_\_

## PhD Students

- 1) Name Alessandro Ciarloni
- 2) Name \_\_\_\_\_
- 3) Name \_\_\_\_\_

## Nurses

- 1) Name Antonella Polimanti
- 2) Name \_\_\_\_\_
- 3) Name \_\_\_\_\_

## Laboratory Technicians

- 1) Name Nicola Delli Muti
- 2) Name Arianna Vignini
- 3) Name Sara Sacco

## Administrative Personnel

- 1) Name Luca Micelli
- 2) Name \_\_\_\_\_
- 3) Name \_\_\_\_\_

#### 4. Clinical Activity

##### A. Outpatients: Consultations per year in the last 3 years

	2022	2023	2024
New patients	641	673	665
Follow-up patients	573	583	579

Type of patients in the last years (%)	2022	2023	2024
Infertility	240	247	253
Erectile dysfunction	571	583	610
Hypogonadotropic Hypogonadism	131	127	105
Klinefelter	49	53	50
Gynaecomastia	33	41	45
Varicocele	131	132	127
Cryptorchidism	34	40	30
Male sex accessory gland infections	14	15	10
Testicular tumours	1	2	0
Disorders of gender identity	10	13	13
Other	0	3	1

##### B. Ultrasound (testis, penile, prostate) \*

	2022	2023	2024
Total	203	215	204
Controls	194	199	192

\* performed at the Department of Radiology

##### C. Andrological surgery procedures

	2022	2023	2024
Testicular biopsies	0	0	0
Varicocele ligation	27	30	29
Prostate biopsies	0	0	0
BPH	0	0	0
Prostate cancer	0	0	0
Vasectomy	0	0	0
Vaso-vasostomy	0	0	0
Other	0	0	0

## 5. A. Andrology laboratory activity

	2022	2023	2024
Semen analyses	403	399	401
Sperm antibodies	310	302	307
Seminal markers	25	29	27

## 5. B. Andrology laboratory activity

Sperm banking donors Yes  No Sperm banking cancer patients Yes  No **If yes:**

	2023	2024	2025
Number of samples			

5. C. Histopathological evaluation of biopsies Yes  No 5. D. Reproductive Hormones Assays Yes  No 

If yes please specify type of assays and number of samples in the last year

During the last year about 3500 samples for FSH, LH, testosterone, SHBG or prolactin were measured by chemiluminescent immunoassays

5. E. Y chromosome microdeletions according to EAA/EMQN guidelines Yes  No **If yes** number of tests in the past year \_\_\_\_\_Participation to the EAA quality control scheme? Yes  No **If no**, specify if available in another lab of the same hospital Yes  No Blood karyotyping Yes  No **If no**, specify if available in another lab of the same hospital Yes  No Other genetic tests (please specify)  
CFTR, Androgen Receptor

## 6. Collaborations with other Clinical Units of the University/Hospital

**IVF Unit** Yes  No   
*If yes* please specify: Children, Endocrinology, IVF, Urology, Genetics, Pathology

Urology Clinic Yes  No

Endocrine Clinic Yes  No

Genetics Lab/Unit Yes  No

Paediatric Unit Yes  No

Central Hospital Laboratory Yes  No

Private Centres Yes  No

*If yes* please specify:

## 7. Clinical teaching activity

Duration of training (years):

	Number
A: Trainees in the last five years	17
B: Trainees who passed EAA-ESAU\exam for Clinical Andrologist in the last 5 yrs	4
C: Trainees working in the centre preparing to pass the EAA-ESAU examination	2
D: PhD Students	1
E: Medical Students	2
F: Other students (MSc)	

**8. Formal Andrology teaching program** Yes  No

*If yes:* specify duration (years/months): Years  Months

	Hours of formal teaching per year	Professional training (weeks/months)
Medical Students	20	
PhD Students	40	
Post Graduate students	20	
Trainees		
Other degrees (please specify)		

**9. Research Activity** (maximum 1 page)

The scientific activities of our center involve several fields of andrology. Some activities were organized and developed locally with the support of Marche Polytechnic University. Others were developed in collaboration with national and international institutions to which data and/or biological samples were sent (or from which they were received). Our main fields of research are:

- Androgen receptor gene polymorphisms: two original articles (10.1111/and.12119, 10.1007/s12020-014-0193-2) regarding the effects of CAG polymorphism on sperm motility were published in *Andrology* (IF 4.456) and *Andrologia* (IF 2.532); four papers regarding the effects of CAG polymorphism on male metabolism (10.1007/s11739-016-1479-6, 10.1007/s40618-014-0052-2, 10.1016/j.numecd.2014.02.016, and 10.1155/2013/816740) were published in *International Journal of Endocrinology* (IF 3.257), *Nutrition, Metabolism and Cardiovascular Diseases* (IF 4.222), and *Journal of Endocrinological Investigation* (IF 5.467).

- Role of endothelial dysfunction in andrological diseases: two original papers (10.1155/2018/3720813 and 10.1007/s40618-017-0671-5) regarding vitamin D levels and gonadal function were published in *International Journal of Endocrinology* (IF 3.257) and *Journal of Endocrinological Investigation* (IF 5.467). An original paper (10.1111/andr.13169) and a narrative review (10.3390/ijms22010418) regarding hyperhomocysteinemia and erectile dysfunction were published in *Andrology* (IF 4.456) and *International Journal of Molecular Sciences* (IF 6.208).

- Role of antioxidants in male infertility: several papers were published regarding the effects of Coenzyme Q10 treatment on male infertility, including two papers (10.1007/s12020-014-0432-6 and 10.1016/j.fertnstert.2008.02.119) published in *Endocrine* (IF 3.925) and *Fertility and Sterility* (IF 7.49), and a systematic review (10.3390/antiox10060874) published in *Antioxidants* (IF 7.675).

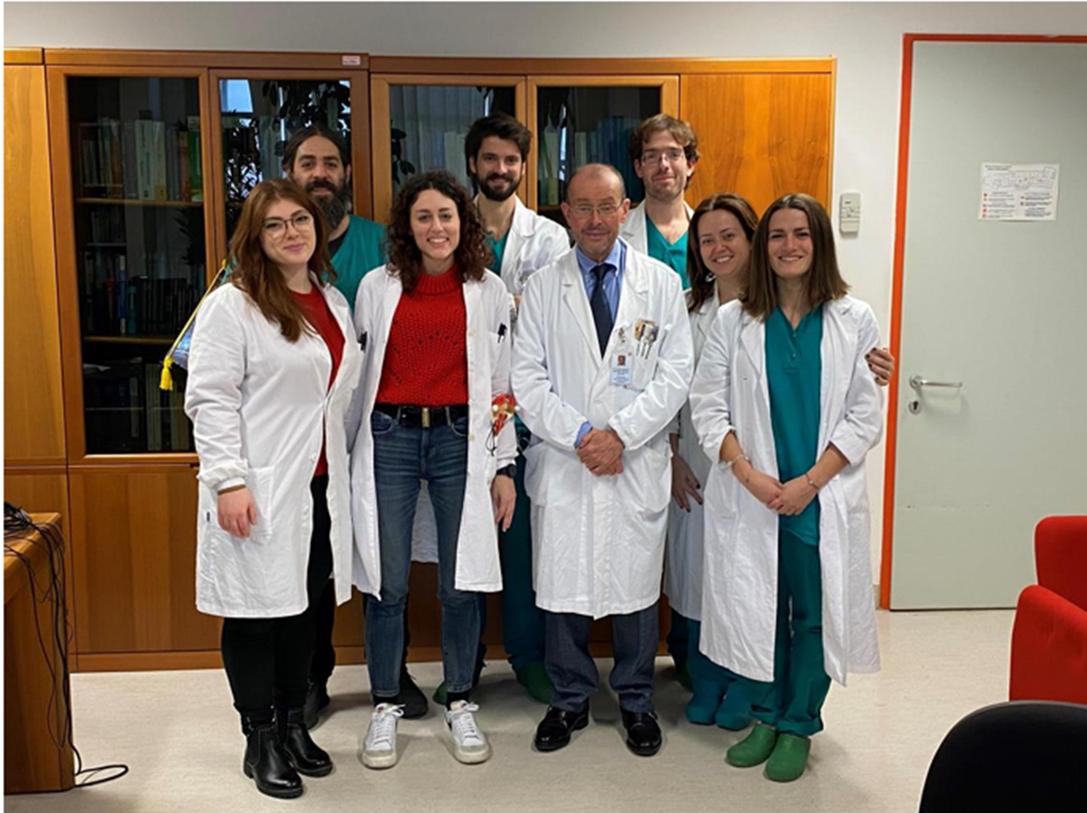
Our group also participates to collaborative national projects, including Klinefelter Italian Group (KING). Moreover, we contributed to the EAA Ultrasound study on healthy, fertile men, which results were recently published in *Andrology* (IF 4.456).

**10. Research Funding**

Please specify the amount of available funds in the last 3 years and their source (Government, European Union, University, Local Government, Pharmaceutical Industries, Banks, Foundations....)

<b>Year</b>	2022-2025
<b>Total amount (€)</b>	90.000
<b>Funding Source(s)</b>	Italian Ministry of Education; Italian Ministry of Health; Polytechnic University of Marche

*Insert any additional funding below if required*

**CENTRE PHOTOS**

**FULL LIST OF PUBLICATIONS (with IF) of staff members from the last 5 years**

1: Scarpa ES, Antonelli A, Balercia G, Sabatelli S, Maggi F, Caprioli G, Giacchetti G, Micucci M. Antioxidant, Anti-Inflammatory, Anti-Diabetic, and Pro-Osteogenic Activities of Polyphenols for the Treatment of Two Different Chronic Diseases: Type 2 Diabetes Mellitus and Osteoporosis. *Biomolecules* (IF 4.8). 2024 Jul 11;14(7):836. doi: 10.3390/biom14070836. PMID: 39062550; PMCID: PMC11275061.

2: Salvio G, Martino M, Balercia G, Arnaldi G. Acromegaly and male sexual health. *Rev Endocr Metab Disord* (IF 8.0). 2022 Jun;23(3):671-678. doi: 10.1007/s11154-022-09721-0. Epub 2022 Apr 1. PMID: 35364803; PMCID: PMC9156476.

3: Salvio G, Martino M, Giancola G, Arnaldi G, Balercia G. Hypothalamic-Pituitary Diseases and Erectile Dysfunction. *J Clin Med* (IF 2.9). 2021 Jun 9;10(12):2551. doi: 10.3390/jcm10122551. PMID: 34207687; PMCID: PMC8229897.

4: Scarpa ES, Giordani C, Antonelli A, Petrelli M, Balercia G, Silvetti F, Pieroni A, Sabbatinelli J, Rippon MR, Olivieri F, Matakchione G. The Combination of Natural Molecules Naringenin, Hesperetin, Curcumin, Polydatin and Quercetin Synergistically Decreases SEMA3E Expression Levels and DPPIV Activity in In Vitro Models of Insulin Resistance. *Int J Mol Sci* (IF 4.9). 2023 Apr 29;24(9):8071. doi: 10.3390/ijms24098071. PMID: 37175783; PMCID: PMC10178687.

5: Sabatelli S, Scarpa ES, Giuliani A, Giordani C, Sabbatinelli J, Rippon MR, Cabodi S, Petrini B, Balercia G, Giacchetti G. Pro-Osteogenic Effect of the Nutraceutical BlastiMin Complex<sup>®</sup> in Women with Osteoporosis or Osteopenia: An Open Intervention Clinical Trial. *Int J Mol Sci* (IF 4.9). 2024 Aug 6;25(16):8565. doi: 10.3390/ijms25168565. PMID: 39201253; PMCID: PMC11354786.

6: Shah R, et al. Global Practice Patterns in the Evaluation of Non-Obstructive Azoospermia: Results of a World-Wide Survey and Expert Recommendations. *World J Mens Health* (IF 4.1). 2024 Oct;42(4):727-748. doi: 10.5534/wjmh.230333. Epub 2024 Apr 3. PMID: 38606865; PMCID: PMC11439803.

7: Shah R, et al. Global Andrology Forum. Consensus and Diversity in the Management of Varicocele for Male Infertility: Results of a Global Practice Survey and Comparison with Guidelines and Recommendations. *World J Mens Health* (IF 4.1). 2023 Jan;41(1):164-197. doi: 10.5534/wjmh.220048. Epub 2022 Jun 13. PMID: 35791302; PMCID: PMC9826919.

8: Salvio G, Ciarloni A, Ambo N, Bordoni M, Perrone M, Rossi S, Balercia G. Effects of glucagon-like peptide 1 receptor agonists on testicular dysfunction: A systematic review and meta-analysis. *Andrology* (IF 3.4). 2025 Nov;13(8):2022-2034. doi: 10.1111/andr.70022. Epub 2025 Mar 19. PMID: 40105090; PMCID: PMC12569732.

9: Rossi S, Silvetti F, Bordoni M, Ciarloni A, Salvio G, Balercia G. Pembrolizumab-induced Thyroiditis, Hypophysitis and Adrenalitis: A Case of Triple Endocrine Dysfunction. *JCEM Case Rep.* 2024 Nov 4;2(11):luae200. doi:10.1210/jcemcr/luae200. Erratum in: *JCEM Case Rep.* 2025 Oct 08;3(11):luaf254. doi: 10.1210/jcemcr/luaf254. PMID: 39498471; PMCID: PMC11532647.

10: Salvio G, Balercia G, Kadioglu A. Hypogonadotropic hypogonadism as a cause of NOA and its treatment. *Asian J Androl (IF 2.7).* 2025 May 1;27(3):322-329. doi: 10.4103/aja202483. Epub 2024 Oct 22. PMID: 39513636; PMCID: PMC12112936.

11: Delli Muti N, Finocchi F, Tossetta G, Salvio G, Cutini M, Marzioni D, Balercia G. Could SARS-CoV-2 infection affect male fertility and sexuality? *APMIS (IF 2.6).* 2022 May;130(5):243-252. doi: 10.1111/apm.13210. Epub 2022 Mar 5. PMID: 35114008; PMCID: PMC9314998.

12: Cannarella R, et al. Global Andrology Forum. Does Varicocele Repair Improve Conventional Semen Parameters? A Meta-Analytic Study of Before-After Data. *World J Mens Health (IF 4.1).* 2024 Jan;42(1):92-132. doi: 10.5534/wjmh.230034. Epub 2023 Jun 22. PMID: 37382284; PMCID: PMC10782123.

13: Rambhatla A, et al. Global Andrology Forum. Global Practice Patterns and Variations in the Medical and Surgical Management of Non-Obstructive Azoospermia: Results of a World-Wide Survey, Guidelines and Expert Recommendations. *World J Mens Health (IF 4.1).* 2025 Jan;43(1):92-122. doi: 10.5534/wjmh.230339. Epub 2024 Apr 4. PMID: 38606867; PMCID: PMC11704169.

14: Shah R, et al. The Global State of Contemporary Andrology Practice: A Comprehensive Analysis of Clinical Practice, Training Pathways, and Emerging Challenges. *World J Mens Health (IF 4.1).* 2025 Jun 25. doi: 10.5534/wjmh.250039. Epub ahead of print. PMID: 40583018.

15: Salvio G, Cutini M, Ciarloni A, Giovannini L, Perrone M, Balercia G. Coenzyme Q10 and Male Infertility: A Systematic Review. *Antioxidants (IF 6.6).* 2021 May 30;10(6):874. doi: 10.3390/antiox10060874. PMID: 34070761; PMCID: PMC8226917.

16: Tossetta G, Fantone S, Delli Muti N, Balercia G, Ciavattini A, Giannubilo SR, Marzioni D. Preeclampsia and severe acute respiratory syndrome coronavirus 2 infection: a systematic review. *J Hypertens (IF 4.2).* 2022 Sep 1;40(9):1629-1638. doi: 10.1097/HJH.0000000000003213. Epub 2022 Jul 22. PMID: 35943095; PMCID: PMC10860893.

17: Salvio G, Ciarloni A, Cutini M, Delli Muti N, Finocchi F, Perrone M, Rossi S, Balercia G. Metabolic Syndrome and Male Fertility: Beyond Heart Consequences of a Complex Cardiometabolic Endocrinopathy. *Int J Mol Sci (IF 4.9)*. 2022 May 14;23(10):5497. doi: 10.3390/ijms23105497. PMID: 35628307; PMCID: PMC9143238.

18: Agarwal A, et al. Technical Aspects and Clinical Limitations of Sperm DNA Fragmentation Testing in Male Infertility: A Global Survey, Current Guidelines, and Expert Recommendations. *World J Mens Health (IF 4.1)*. 2024 Jan;42(1):202-215. doi: 10.5534/wjmh.230076. Epub 2023 Aug 24. PMID: 37635341; PMCID: PMC10782128.

19: Colonnello E, Limoncin E, Ciocca G, Sansone A, Mollaioli D, Balercia G, Porst H, Zhang H, Yu X, Zhang Y, Jannini EA. The Lost Penis Syndrome: A New Clinical Entity in Sexual Medicine. *Sex Med Rev (IF 3.4)*. 2022 Jan;10(1):113-129. doi: 10.1016/j.sxmr.2021.08.001. Epub 2021 Oct 5. PMID: 34620562.

20: Salvio G, Ciarloni A, Cutini M, Balercia G. Hyperhomocysteinemia: Focus on Endothelial Damage as a Cause of Erectile Dysfunction. *Int J Mol Sci (IF 4.9)*. 2021 Jan 3;22(1):418. doi: 10.3390/ijms22010418. PMID: 33401548; PMCID: PMC7795368.

21: Attia H, Finocchi F, Orciani M, Mehdi M, Zidi Jrah I, Lazzarini R, Balercia G, Mattioli Belmonte M. Pro-inflammatory cytokines and microRNAs in male infertility. *Mol Biol Rep (IF 2.8)*. 2021 Aug;48(8):5935-5942. doi: 10.1007/s11033-021-06593-6. Epub 2021 Jul 28. PMID: 34319544; PMCID: PMC8376712.

22: Agarwal A, et al. Sperm Vitality and Necrozoospermia: Diagnosis, Management, and Results of a Global Survey of Clinical Practice. *World J Mens Health (IF 4.1)*. 2022 Apr;40(2):228-242. doi: 10.5534/wjmh.210149. Epub 2021 Oct 13. PMID: 34666422; PMCID: PMC8987132.

23: Giulioni C, Maurizi V, Castellani D, Scarcella S, Skrami E, Balercia G, Galosi AB. The environmental and occupational influence of pesticides on male fertility: A systematic review of human studies. *Andrology (IF 3.4)*. 2022 Oct;10(7):1250-1271. doi: 10.1111/andr.13228. Epub 2022 Jul 18. PMID: 35793270; PMCID: PMC9541307.

24: Salvio G, Ciarloni A, Gianfelice C, Lacchè F, Sabatelli S, Giacchetti G, Balercia G. The Effects of Polyphenols on Bone Metabolism in Postmenopausal Women: Systematic Review and Meta-Analysis of Randomized Control Trials. *Antioxidants (IF 6.6)*. 2023 Oct 5;12(10):1830. doi: 10.3390/antiox12101830. PMID: 37891909; PMCID: PMC10604028.

25: Gupta S, et al. Antisperm Antibody Testing: A Comprehensive Review of Its Role in the Management of Immunological Male Infertility and Results of a Global Survey of Clinical Practices. *World J Mens Health (IF 4.1)*. 2022 Jul;40(3):380-398. doi: 10.5534/wjmh.210164. Epub 2022 Jan 1. PMID: 35021297; PMCID: PMC9253805.

26: Gianfelice C, Firmani F, Salvio G, Ciarloni A, Ferroni R, Silvetti F, Giovannini L, Pistelli M, Agostinelli V, Berardi R, Balercia G, Giacchetti G. Comparison Between Alendronate and Denosumab in Preventing Bone Loss and Lowering Fracture Risk Related to Adjuvant Endocrine Therapy for Breast Cancer: Real-World Data From a Third-Level Center Experience. *Endocr Pract* (IF 4.6). 2025 Jul 11:S1530-891X(25)00962-0. doi: 10.1016/j.eprac.2025.07.004. Epub ahead of print. PMID: 40653165.

27: Delli Muti N, Salvio G, Ciarloni A, Perrone M, Tossetta G, Lazzarini R, Bracci M, Balercia G. Can extremely low frequency magnetic field affect human sperm parameters and male fertility? *Tissue Cell* (IF 2.5). 2023 Jun;82:102045. doi: 10.1016/j.tice.2023.102045. Epub 2023 Feb 18. PMID: 36870312.

28: Martelli M, Salvio G, Lazzarini R, Milinkovic M, Ciarloni A, Balercia G, Santarelli L, Bracci M. Night shift work and serum markers of bone turnover in male shift workers. *Chronobiol Int* (IF 1.7). 2023 Sep 2;40(9):1270-1278. doi: 10.1080/07420528.2023.2262570. Epub 2023 Oct 9. PMID: 37781875.

29: di Fraia R, Esposito D, Selvaggio LD, Allosso F, Alfano R, Rotondi M, Balercia G, Accardo G, Pasquali D. Increased prevalence of nodular thyroid disease in patients with Klinefelter syndrome. *Endocrine* (IF 2.9). 2023 Sep;81(3):631-636. doi:10.1007/s12020-023-03387-7. Epub 2023 May 6. PMID: 37148417; PMCID: PMC10403437.

30: Salvio G, Ciarloni A, Cordoni S, Cutini M, Delli Muti N, Finocchi F, Firmani F, Giovannini L, Perrone M, Balercia G. Homocysteine levels correlate with velocimetric parameters in patients with erectile dysfunction undergoing penile duplex ultrasound. *Andrology* (IF 3.4). 2022 May;10(4):733-739. doi: 10.1111/andr.13169. Epub 2022 Mar 8. PMID: 35224883; PMCID: PMC9310719.

31: Scarpa ES, Amatori S, Caprioli G, Maggi F, Moroncini G, Balercia G, Giacchetti G. Innovative Therapeutic Approaches Targeting Obesity: Can Flavonoids Improve the Efficacy of Anti-Obesogenic Drugs? *Int J Mol Sci* (IF 4.9). 2025 Oct 18;26(20):10142. doi: 10.3390/ijms262010142. PMID: 41155431; PMCID: PMC12562994.

32: Salvio G, Gianfelice C, Firmani F, Lunetti S, Ferroni R, Balercia G, Giacchetti G. Remote management of osteoporosis in the first wave of the COVID-19 pandemic. *Arch Osteoporos* (IF 2.8). 2022 Mar 2;17(1):37. doi: 10.1007/s11657-022-01069-x. PMID: 35235056; PMCID: PMC8889057.

33: Bordoni M, Aboud N, Silvetti F, Taccaliti A, Balercia G, Salvio G. Towards an Integrated Multi-Omic Approach to Improve the Diagnostic Accuracy of Fine-Needle Aspiration in Thyroid Nodules with Indeterminate Cytology. *Diagnostics* (IF 3.3). 2025

Jun 13;15(12):1506. doi: 10.3390/diagnostics15121506. PMID: 40564827; PMCID: PMC12192114.

34: Vespa A, Giulietti M, Gattafoni P, Fabbietti P, Berardi R, Arnaldi G, Balercia G, Salvio G, Ricciuti M, Spatuzzi R. Psychometric properties of the Italian version of the Revised Temperament and Character Inventory (TCI-140) in adults and older adults with cancer managed in outpatient settings. *J Geriatr Oncol* (IF 2.7). 2023 Mar;14(2):101416. doi: 10.1016/j.jgo.2022.12.004. Epub 2023 Jan 13. PMID: 36641835.

35: Sansone A, Mollaioli D, Ciocca G, Colonnello E, Limoncin E, Balercia G, Jannini EA. "Mask up to keep it up": Preliminary evidence of the association between erectile dysfunction and COVID-19. *Andrology* (IF 3.4). 2021 Jul;9(4):1053-1059. doi: 10.1111/andr.13003. Epub 2021 Mar 30. PMID: 33742540; PMCID: PMC8250520.

36: Lotti F, Frizza F, Balercia G, Barbonetti A, Behre HM, Calogero AE, Cremers JF, Francavilla F, Isidori AM, Kliesch S, La Vignera S, Lenzi A, Marcou M, Pilatz A, Poolamets O, Punab M, Godoy MFP, Quintian C, Rajmil O, Salvio G, Shaeer O, Weidner W, Maseroli E, Cipriani S, Baldi E, Degl'Innocenti S, Danza G, Caldini AL, Terreni A, Boni L, Krausz C, Maggi M. The European Academy of Andrology (EAA) ultrasound study on healthy, fertile men: An overview on male genital tract ultrasound reference ranges. *Andrology* (IF 3.4). 2022 Oct;10 Suppl 2(Suppl 2):118-132. doi: 10.1111/andr.13260. PMID: 35930758; PMCID: PMC9828651.

37: Lotti F, Frizza F, Balercia G, Barbonetti A, Behre HM, Calogero AE, Cremers JF, Francavilla F, Isidori AM, Kliesch S, La Vignera S, Lenzi A, Marcou M, Pilatz A, Poolamets O, Punab M, Godoy MFP, Quintian C, Rajmil O, Salvio G, Shaeer O, Weidner W, Maseroli E, Cipriani S, Baldi E, Degl'Innocenti S, Danza G, Caldini AL, Terreni A, Boni L, Krausz C, Maggi M. The European Academy of Andrology (EAA) ultrasound study on healthy, fertile men: Prostate-vesicular transrectal ultrasound reference ranges and associations with clinical, seminal and biochemical characteristics. *Andrology* (IF 3.4). 2022 Sep;10(6):1150-1171. doi:10.1111/andr.13217. Epub 2022 Jul 19. PMID: 35735741; PMCID: PMC9544532.

38: Faja F, Finocchi F, Carlini T, Rizzo F, Pallotti F, Spaziani M, Balercia G, Lenzi A, Paoli D, Lombardo F. PDE11A gene polymorphism in testicular cancer: sperm parameters and hormonal profile. *J Endocrinol Invest* (IF 3.5). 2021 Oct;44(10):2273-2284. doi: 10.1007/s40618-021-01534-3. Epub 2021 Mar 4. PMID: 33661511; PMCID: PMC8421290.

39: Farkouh A, et al. Global Andrology Forum. Controversy and Consensus on the Management of Elevated Sperm DNA Fragmentation in Male Infertility: A Global Survey, Current Guidelines, and Expert Recommendations. *World J Mens Health* (IF 4.1). 2023 Oct;41(4):809-847. doi: 10.5534/wjmh.230008. Epub 2023 Apr 20. PMID: 37118965; PMCID: PMC10523126.

40: Agarwal A, et al. Global Andrology Forum. Controversy and Consensus on Indications for Sperm DNA Fragmentation Testing in Male Infertility: A Global Survey, Current Guidelines, and Expert Recommendations. *World J Mens Health* (IF 4.1). 2023 Jul;41(3):575-602. doi: 10.5534/wjmh.220282. Epub 2023 Apr 10. PMID: 37118960; PMCID: PMC10307662.

41: Pasquali D, Chiodini P, Simeon V, Ferlin A, Vignozzi L, Corona G, Lanfranco F, Rochira V, Calogero AE, Bonomi M, Pivonello R, Balercia G, Pizzocaro A, Giagulli VA, Salacone P, Aversa A, Accardo G, Maggi M, Lenzi A, Isidori A, Foresta C, Jannini EA, Garolla A; KING, Klinefelter ItaliaN Group. First baseline data of the Klinefelter ItaliaN Group (KING) cohort: clinical features of adult with Klinefelter syndrome in Italy. *J Endocrinol Invest* (IF 3.5). 2022 Sep;45(9):1769-1776. doi: 10.1007/s40618-022-01816-4. Epub 2022 May 24. PMID: 35608733; PMCID: PMC9360143.

42: Agarwal A, et al. Post-Vasectomy Semen Analysis: Optimizing Laboratory Procedures and Test Interpretation through a Clinical Audit and Global Survey of Practices. *World J Mens Health* (IF 4.1). 2022 Jul;40(3):425-441. doi: 10.5534/wjmh.210191. Epub 2022 Jan 2. PMID: 35021311; PMCID: PMC9253792.

43: Salvio G, Petrelli M, Paolini S, Baldini V, Sbaffi C, Basili S, Giordano A, Balercia G, Cinti S. Gender-specific effects of capsiate supplementation on body weight and bone mineral density: a randomized, double-blind, placebo-controlled study in slightly overweight women. *J Endocrinol Invest* (IF 3.5). 2023 Jul;46(7):1415-1422. doi: 10.1007/s40618-022-01999-w. Epub 2023 Jan 6. PMID: 36609773.

44: Vespa A, Giulietti MV, Fabbietti P, Di Rosa M, Gattafoni P, Sarzani R, Arnaldi G, Balercia G, Berardi R, Salvo G, Attademo L, Spatuzzi R. Structural Analysis of Social Behavior: Using Cluster Analysis to Examine Intrapsychic Personality Traits Associated With Depression in Women With Breast Cancer. *Cancer Control* (IF 2.6). 2022 Jan-Dec;29:10732748221103327. doi: 10.1177/10732748221103327. PMID: 35968604; PMCID: PMC9379960.

45: Lotti F, Frizza F, Balercia G, Barbonetti A, Behre HM, Calogero AE, Cremers JF, Francavilla F, Isidori AM, Kliesch S, La Vignera S, Lenzi A, Marcou M, Pilatz A, Poolamets O, Punab M, Peraza Godoy MF, Rajmil O, Salvio G, Shaeer O, Weidner W, Maseroli E, Cipriani S, Baldi E, Degl'Innocenti S, Danza G, Caldini AL, Terreni A, Boni L, Krausz C, Maggi M. The European Academy of Andrology (EAA) ultrasound study on healthy, fertile men: Scrotal ultrasound reference ranges and associations with clinical, seminal, and biochemical characteristics. *Andrology* (IF 3.4). 2021 Mar;9(2):559-576. doi: 10.1111/andr.12951. Epub 2021 Jan 19. PMID: 33244893.

46: Vespa A, Giulietti MV, Fabbietti P, Di Rosa M, Gattafoni P, Berardi R, Arnaldi G, Balercia G, Spatuzzi R. Using temperament and character dimensions (TCI) to analyze the personality profiles of adults and older adults with cancer managed in outpatient settings. *Front Psychol* (IF 2.9). 2024 Jan 15;14:1289093. doi: 10.3389/fpsyg.2023.1289093. PMID: 38288360; PMCID: PMC10822941.

47: Delli Muti N, Di Paolo A, Salvio G, Membrino V, Ciarloni A, Alia S, Salvolini E, Vignini A, Balercia G. Effect of resveratrol on sperm motility in subjects affected by idiopathic asthenozoospermia: An in vitro study. *Tissue Cell* (IF 2.5). 2025 Aug;95:102857. doi: 10.1016/j.tice.2025.102857. Epub 2025 Mar 16. PMID: 40106860.

48: Martino M, Salvio G, Cutini M, Arnaldi G, Balercia G. COVID-19 and endocrine and metabolic disorders: critical points and suggestions for a correct therapeutic management from a tertiary endocrine center in Italy. *Minerva Endocrinol* (IF 1.9). 2022 Mar;47(1):117-126. doi: 10.23736/S2724-6507.21.03523-5. Epub 2021 Jul 26. PMID: 34309348.

49: Vespa A, Spatuzzi R, Fabbietti P, Di Rosa M, Luconi MP, Arnaldi G, Balercia G, Salvio G, Sarzani R, Giulietti MV. Structural analysis of social behavior: Using cluster analysis to examine personality profile associated with diabetes onset. *PLoS One* (IF 2.6). 2025 May 9;20(5):e0315895. doi: 10.1371/journal.pone.0315895. PMID: 40343974; PMCID: PMC12063907.