

# SEMEN QUALITY OF MALE PARTNERS OF COUPLES ATTENDING INFERTILITY CLINIC IN HSNZ: A 2-YEAR REVIEW

**Nasuha Yaacob**

*Norhaslinda Ghani, Nadia Ramli*

Reproductive Services Unit

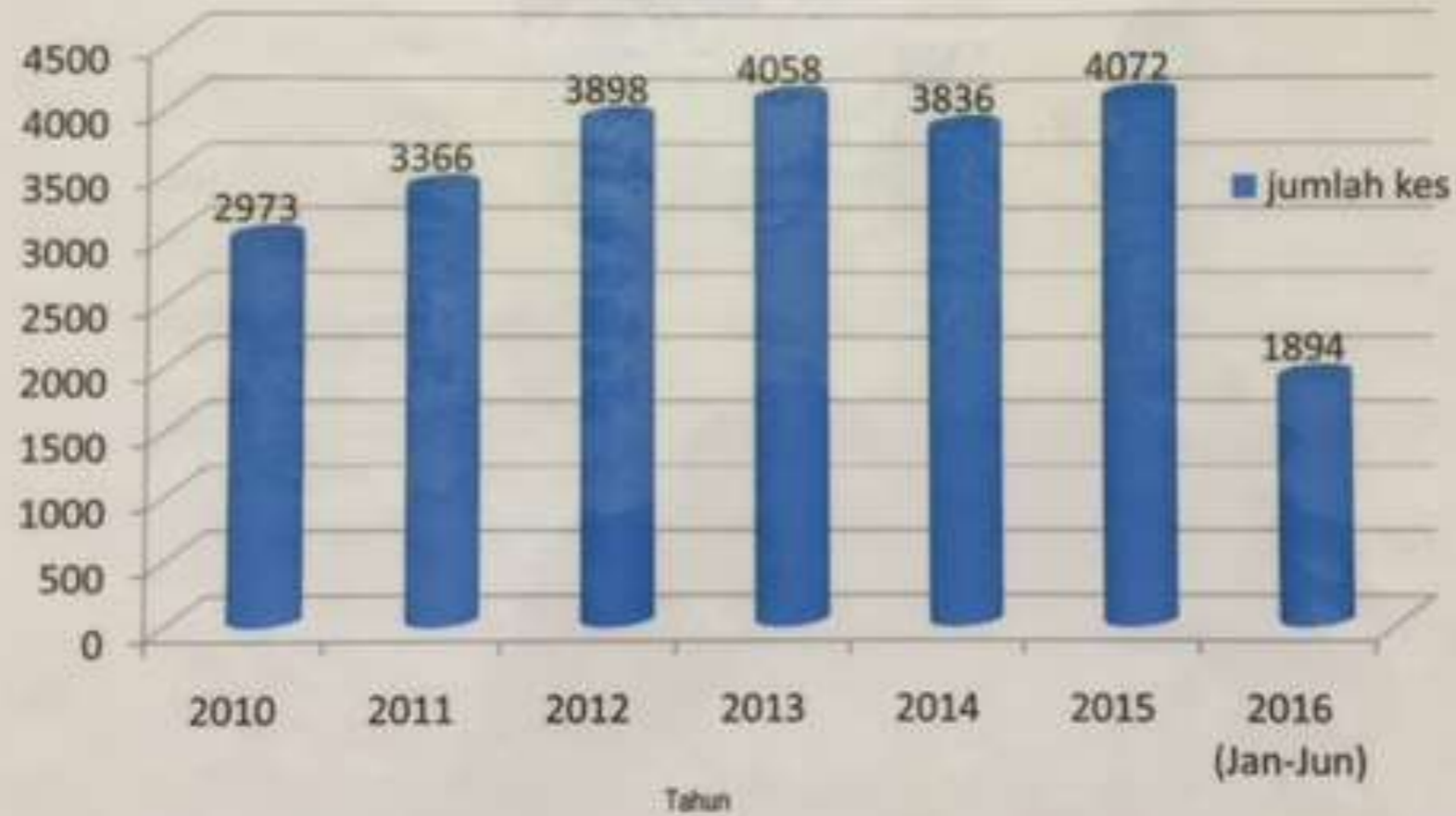
# Reproductive Services Unit



- Reproductive Medicine Specialists
- Medical Officer in Specialist-training
- Embryologists
- Andrologist (MLT)
- Fertility-specialised Nurses



## KLINIK INFERTILITI – JUMLAH KEDATANGAN PESAKIT 2010 -2016



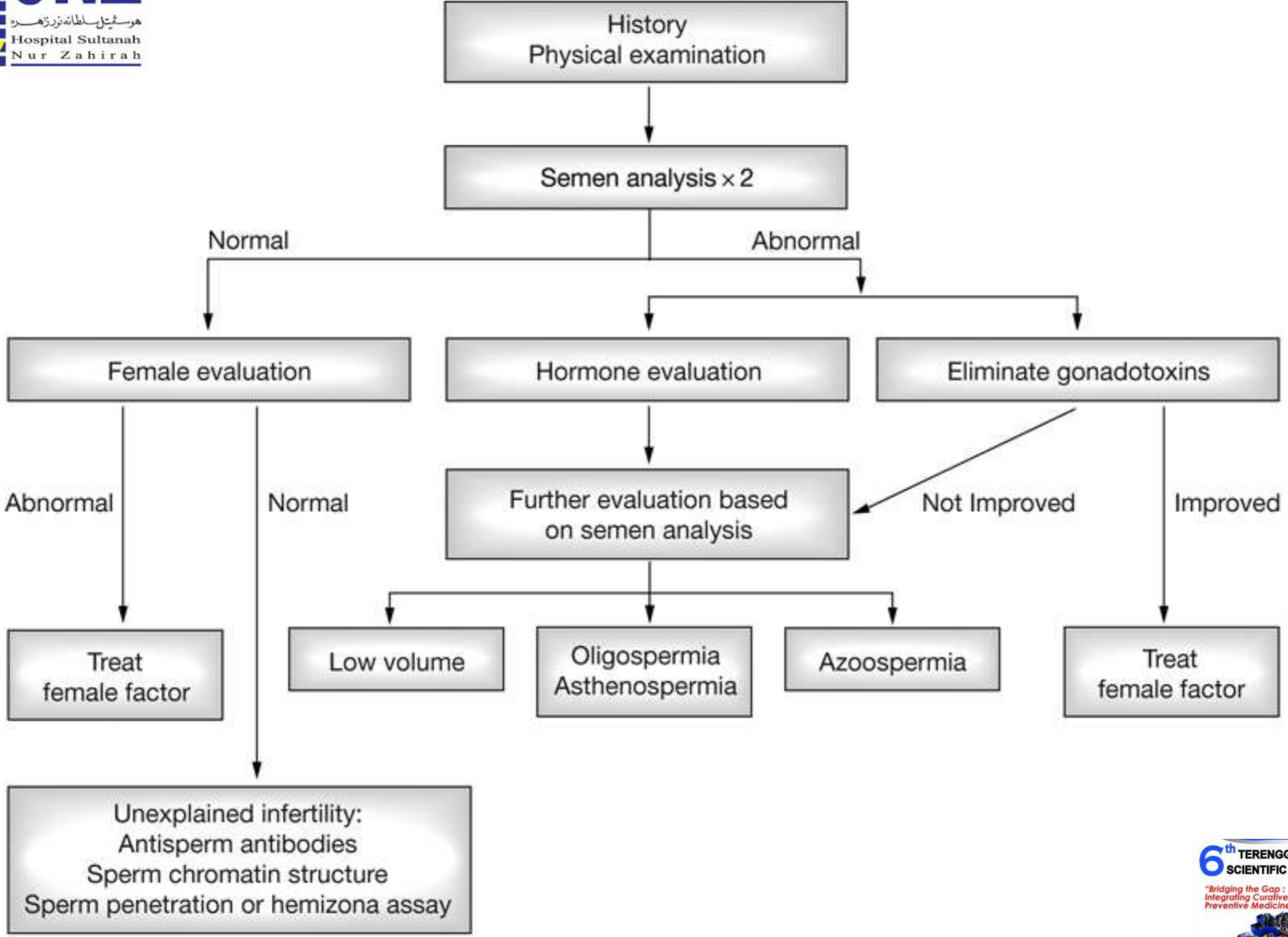
*Julf*  
7.8.2016

DR. MOHD. ZULKIFLI BIN MOHD. KASEM  
No. Pendaftaran Perak MDC 27049  
Klinik Infertiliti Pakar Perunding Ginekologi & Urologi  
Hospital Sultanah Nur Zahirah  
Kuala Terengganu

# Infertility

- Inability to conceive after one year of regular unprotected intercourse.
- 10-15% couples
- Peak monthly pregnancy rate ~ 30%
- cumulative rate in 1 year ~ 85%
- cumulative rate in 2 years ~ 95%





# Semen Quality ?

- A measure of the ability of **semen** to accomplish fertilization.
- Thus, it is a measure of **fertility** in a man.
- It is the sperm in the **semen** that are of importance, and therefore **semen quality** involves both sperm quantity and **quality**.

# Objective

- To determine the prevalence of abnormal sperm parameters among male partners of the subfertile population attending our subspecialist assisted reproductive service.
- We studied:
  - Oligospermia (Low sperm count )
  - Azoospermia (absence of sperm)
  - Pattern and distribution of abnormal sperm parameters

# Methodology

- Retrospective review
- All male partners of women attending outpatient infertility clinics in HSNZ
- January 2014 until December 2015
- Semen analysis as per WHO Standards 2010



# WHO Standards 2010

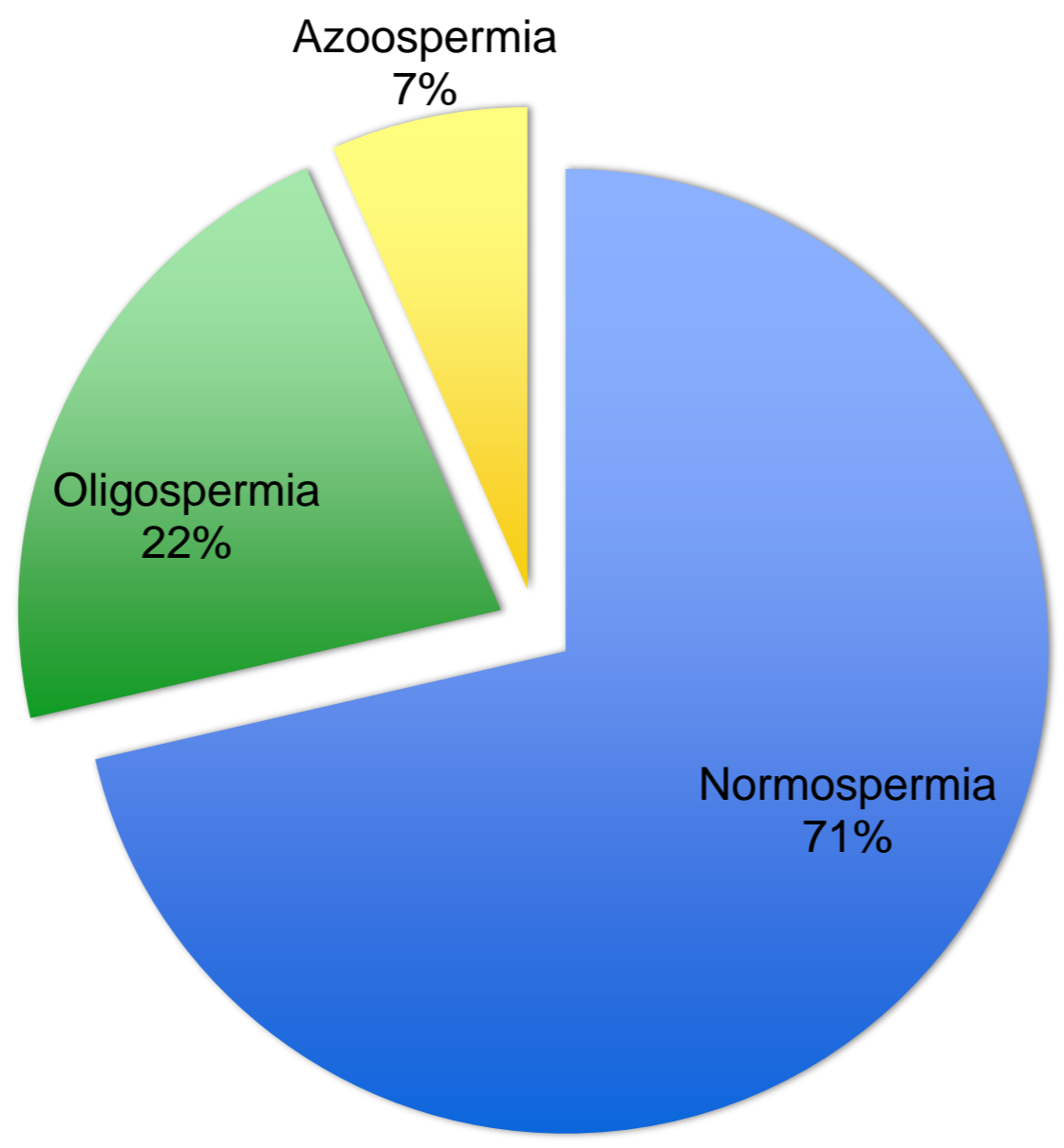
## Cut-off reference values for semen characteristics as published in consecutive WHO manuals

Semen characteristics	WHO 1980	WHO 1987	WHO 1992	WHO 1999	WHO 2010
Volume (mL)	ND	≥ 2	≥ 2	≥ 2	≥ 1.5
Sperm count (10 <sup>6</sup> /mL)	20-200	≥ 20	≥ 20	≥ 20	≥ 15
Total sperm count (10 <sup>6</sup> )	ND	≥ 40	≥ 40	≥ 40	≥ 39
Total motility (%)	≥ 60	≥ 50	≥ 50	≥ 50	≥ 40
Progressive motility	≥ 2	≥ 25%	≥ 25% (a)	≥ 25% (a)	≥ 32% (a+b)
Vitality (%)	ND	≥ 50	≥ 75	≥ 75	≥ 58
Morphology (%)	80.5	≥ 50	≥ 30	(14)*	≥ 4*
Leukocyte count (10 <sup>6</sup> /mL)	< 4.7	< 1.0	< 1.0	< 1.0	< 1.0



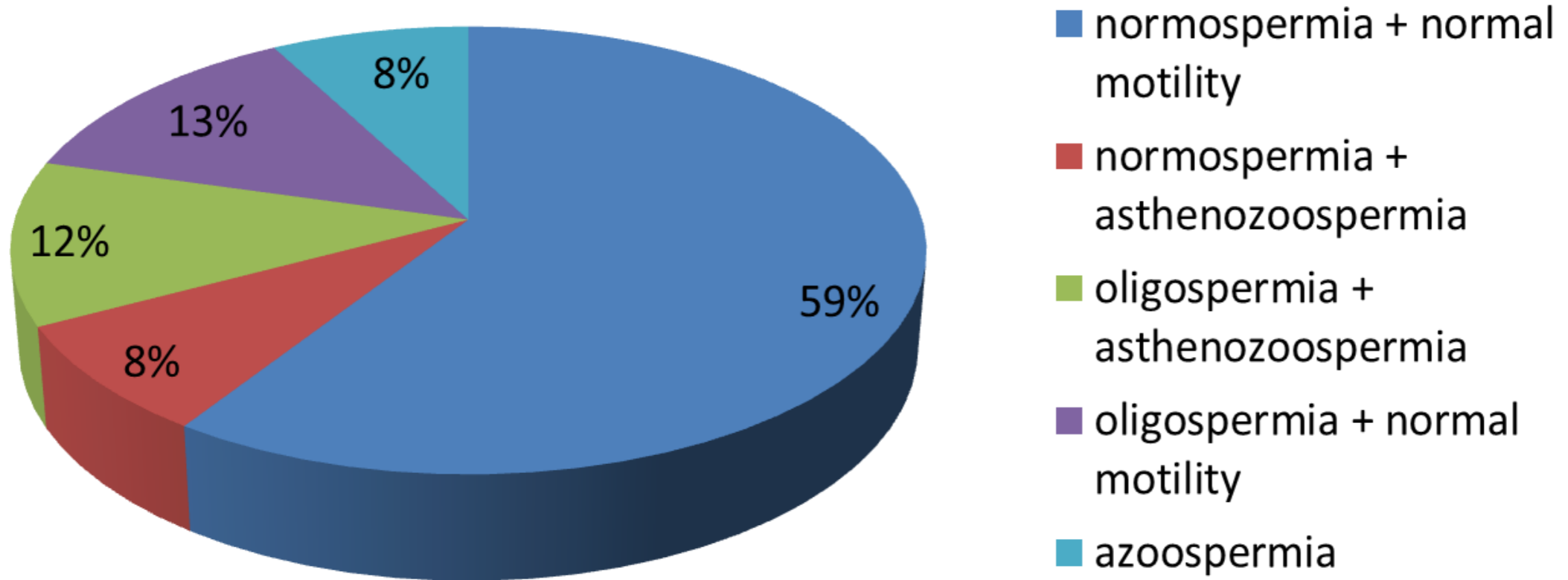
# Result

Column1



Total of 500 semen analysis studied.  
**29%** affected  
**24%** azoospermia

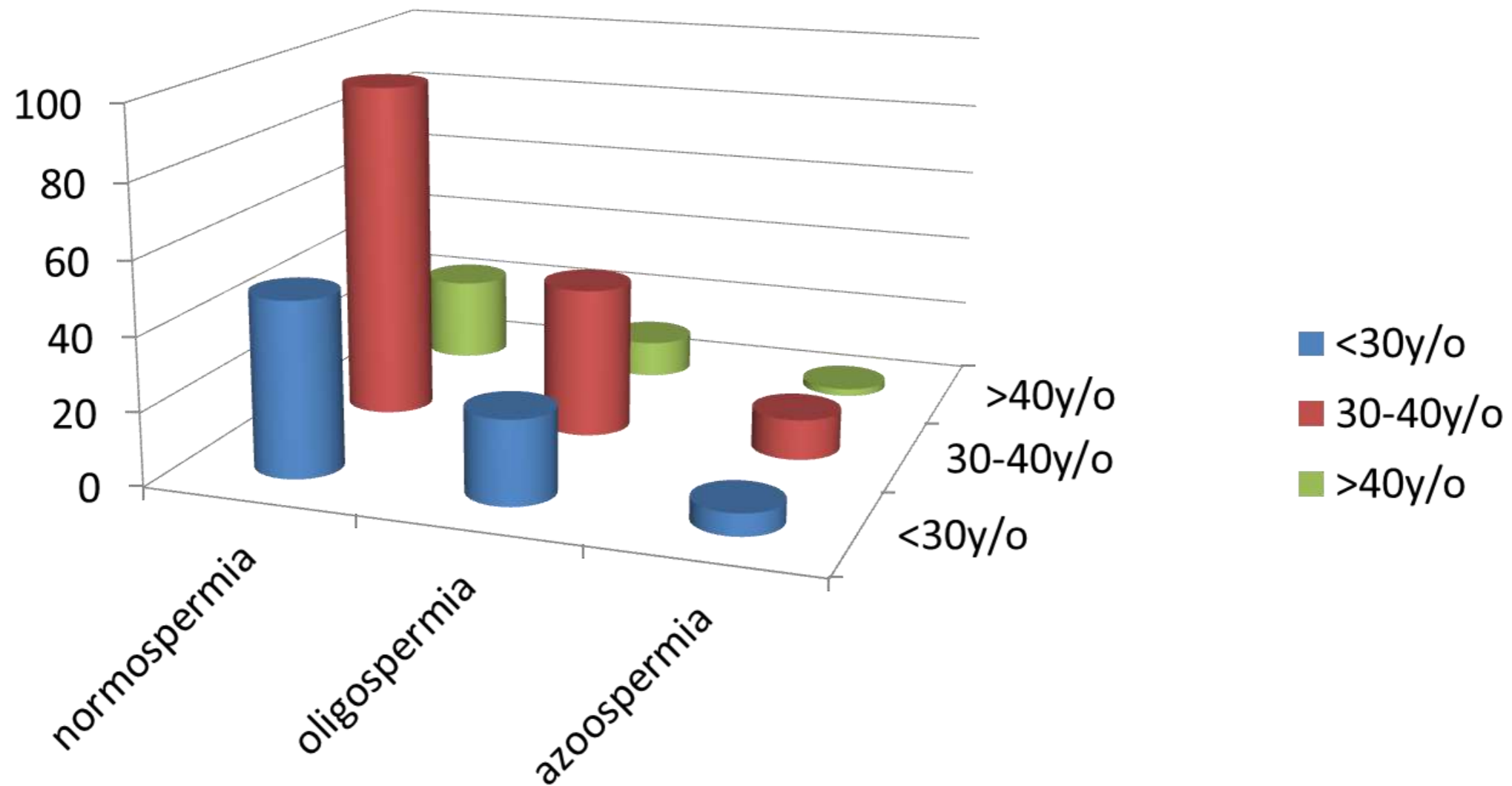
# Motility factor



Sperm count is not the only crucial factor that determines the ability to conceive but sperm motility also plays a significant role in male fertility.

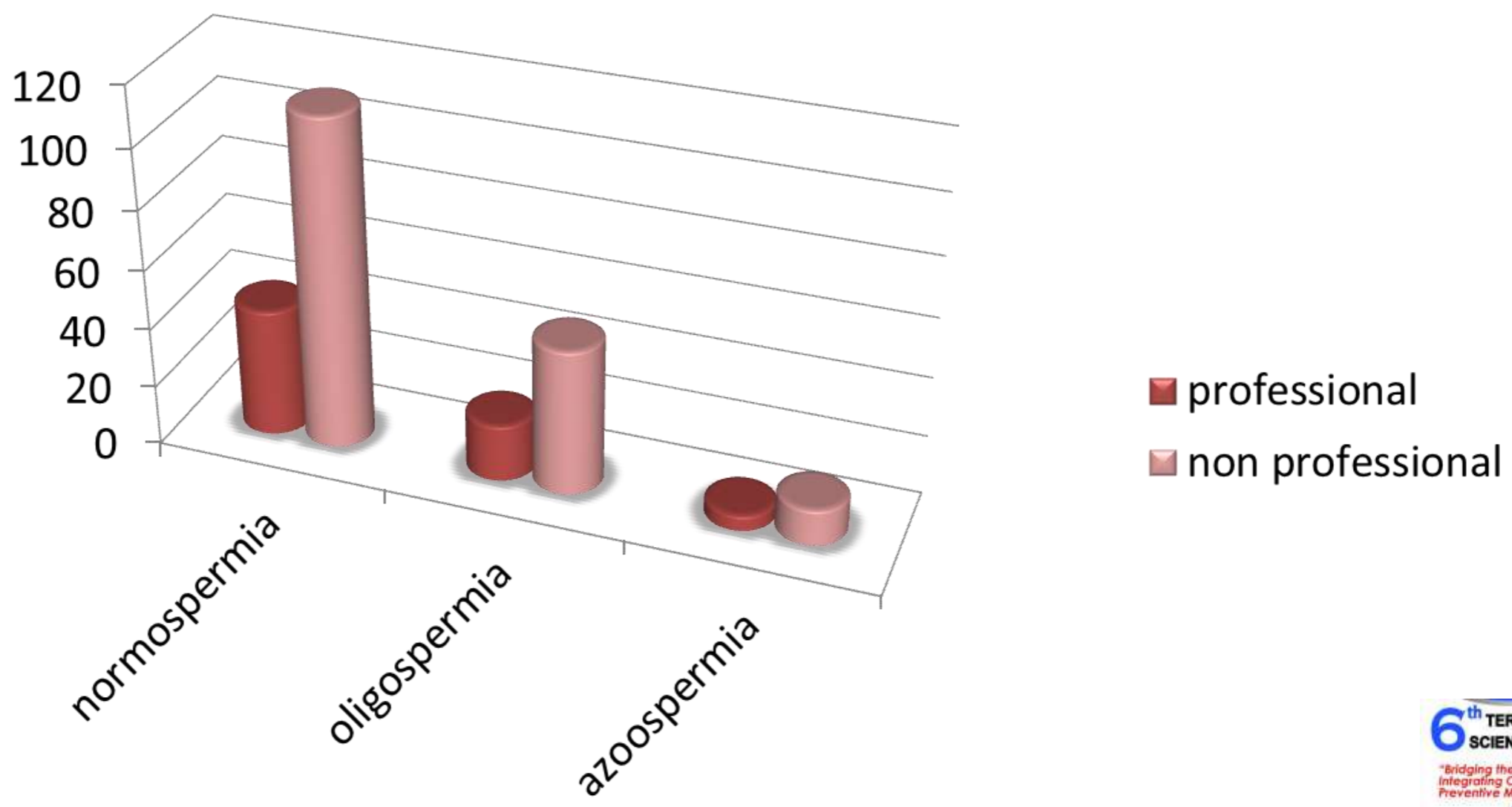
64% of asthenospermic men had oligospermia.  
53% of oligospermic men had asthenospermia

# Age Factor?

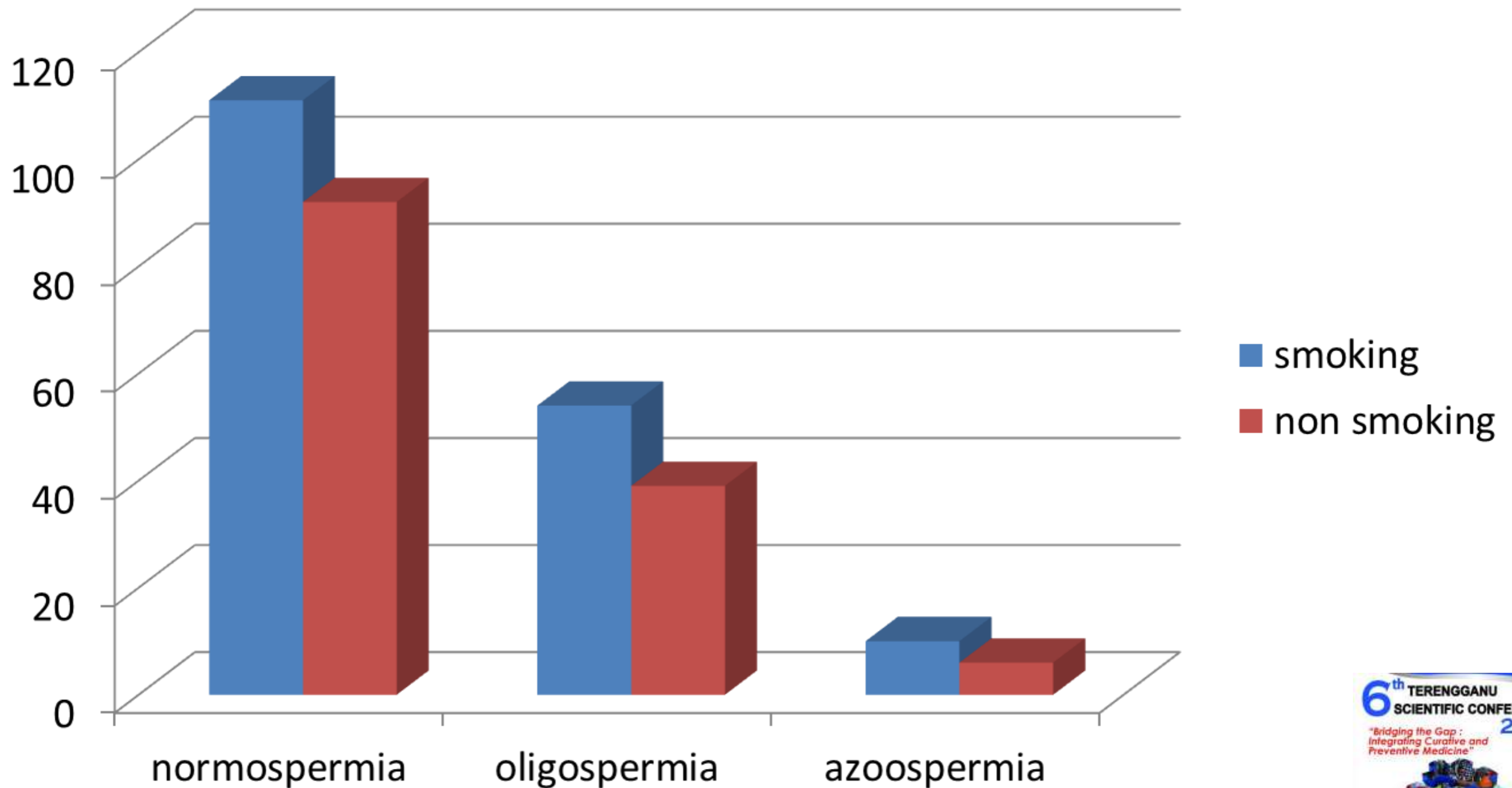


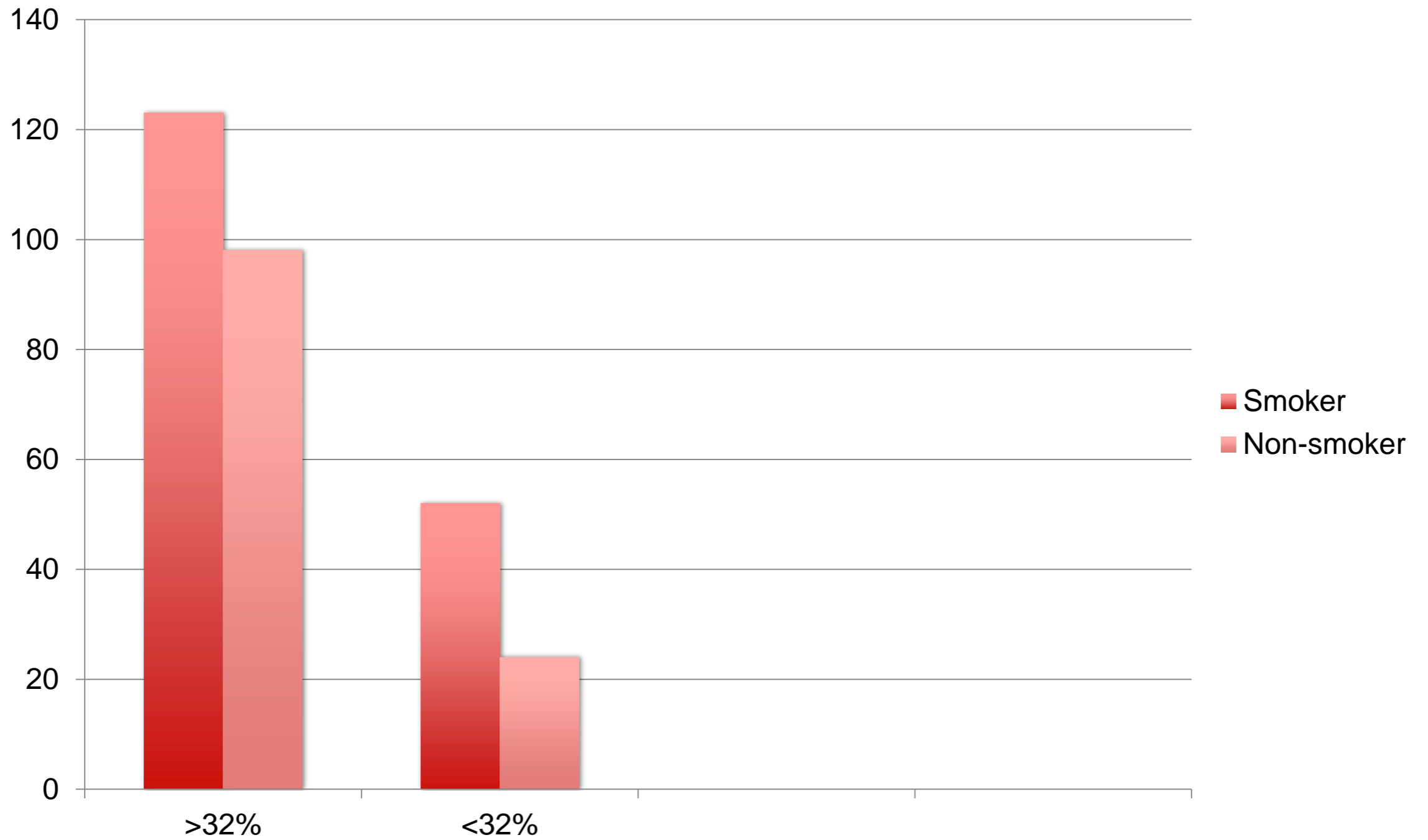
Commonest age group of couples presenting for infertility

# Work-related?



# Smoking effect?





# Progressive Motility



# Conclusion

Abnormal sperm quality affect one third of male partners to couples attending infertility services.

Most patients with abnormal sperm quality belonged to the age group of 30-40 year old and non-professional.

# Conclusion

More smokers among the males in our patients population, affecting sperm motility but not so much sperm count.

Therefore we are currently looking at specific semen parameters among normospermia and oligo-azoospermia smokers, smoking habits and fertility outcomes.



“ex ovo omnia.”  
~William Harvey 1651~

# SEMEN ANALYSIS

SEMEN ANALYSIS IS A TEST ON THE FLUID THAT IS RELEASED WHEN A MAN HAS AN ORGASM. SEMEN ANALYSIS CAN TELL A DOCTOR:

- ✓ HOW MUCH SEMEN A MAN PRODUCES (VOLUME)
- ✓ THE TOTAL NUMBER OF SPERM IN THE SEMEN SAMPLE (TOTAL COUNT)
- ✓ THE NUMBER OF SPERM IN EACH MILLILITER OF SEMEN (CONCENTRATION)



- ✓ THE PERCENTAGE OF SPERM THAT ARE MOVING (MOTILITY)
- ✓ IF THE SPERM ARE THE CORRECT SHAPE AND SIZE (MORPHOLOGY)
- ✓ A SEMEN ANALYSIS CAN ALSO SUGGEST IF YOU HAVE AN INFECTION IN YOUR REPRODUCTIVE SYSTEM

For more information go to [www.ReproductiveFacts.org](http://www.ReproductiveFacts.org)