Transitioning from IVF practice to restorative reproductive medicine.

Tadeusz Wasilewski

NaProMedica

Białystok

Białystok

Cathedral
- Divine Mercy town

Medical University in Branicki Palace
- town of the first in vitro in Poland

Supraśl

Thank You Phil

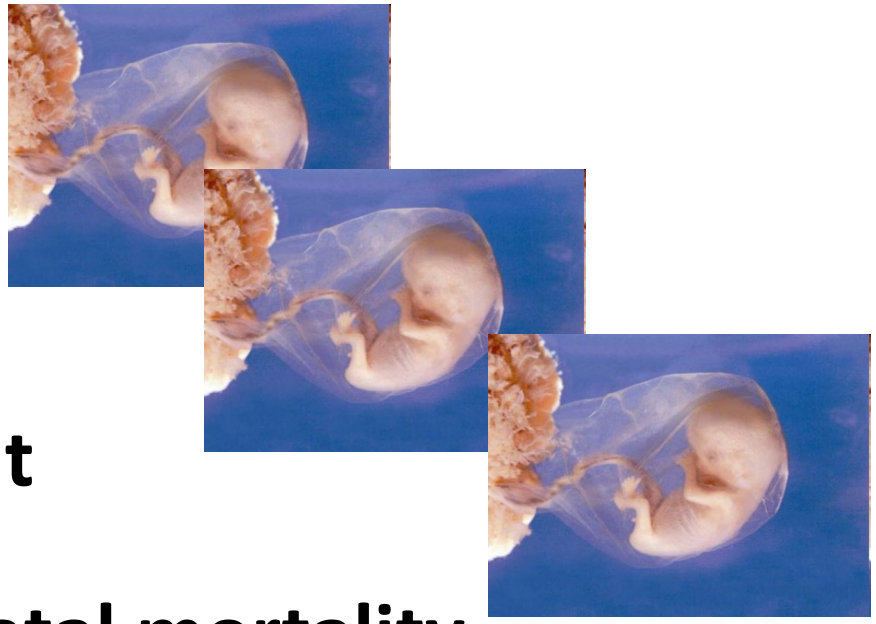
Reproductive medicine today

- **Infertility as a family, social and clinical problem**
- **Assissted Reproductive Technology (ART) as a response of medicine**
- **In vitro fertilization - embryo transfer**

Medical complications of in vitro

- Ovarian hyperstimulation syndrome
- Multiple pregnancies
- Reduced health rates in children

Multiple pregnancies (30%)



- Prematurity
- Low birth weight
- Increased perinatal mortality

Reduced health rates in children

Hansen M, Bower C, Milne E, de Klerk N, J Kurinczuk. Assisted reproductive technologies and the risk of birth defects – a systematic review. Human Reproduction 2005, 20(2),328-338

Human Reproduction Vol.20, No.2 pp.328–338, 2005
Advance Access publication November 26, 2004
doi:10.1093/humrep/deh593

Assisted reproductive technologies and the risk of birth defects—a systematic review

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BACKGROUND: The risk of birth defects in infants born following assisted reproductive technology (ART) treatment is a controversial question. Most publications examining the prevalence of birth defects in ICSI and IVF infants compared to spontaneously conceived infants have serious methodological limitations; despite this, most researchers have concluded that there is no increased risk. METHODS: We carried out a systematic review to identify all papers published by March 2003 with data relating to the prevalence of birth defects in infants conceived following IVF and/or ICSI compared with spontaneously conceived infants. Independent expert reviewers used criteria defined *a priori* to determine whether studies were suitable for inclusion in a meta-analysis. Fixed effects meta-analysis was performed for all studies and reviewer-selected studies. RESULTS: Twenty-five studies were identified for review. Two-thirds of these showed a 25% or greater increased risk of birth defects in ART infants. The results of meta-analyses of the seven reviewer-selected studies and of all 25 studies suggest a statistically significant 30–40% increased risk of birth defects associated with ART. CONCLUSIONS: Pooled results from all suitable published studies suggest that children born following ART are at increased risk of birth defects compared with spontaneous conceptions. This information should be made available to couples seeking ART treatment.

Key words: assisted reproductive technology/congenital malformations/IVF/meta-analysis/systematic review

Conclusion:

Risk of congenital defects associated with ART increases by 30 – 40%

Radical experiment on the genome

Ethical aspects of in vitro

Life not for every child

- selection
- cryopreservation
- preimplantation diagnostics
- embryoreduction

View of ESHRE

According to ESHRE (European Society of Human Reproduction and Embriology) recommendations treatment of infertility should result in birth of a healthy child.

Lambert RD. Safety issues in assisted reproductive technology: aetiology of health problems in singleton ART babies. Hum Reprod. 2003 Oct;18:1987-91.

New views

Physicians and biomedical researchers must be sufficiently proficient to find alternatives or to develop new ethically acceptable medical solutions to prevent iatrogenic problems

Human Reproduction Vol.17, No.12 pp. 3011–3015, 2002

Safety issues in assisted reproduction technology

The children of assisted reproduction confront the responsible conduct of assisted reproductive technologies

Raymond D.Lambert

The Declaration of Helsinki

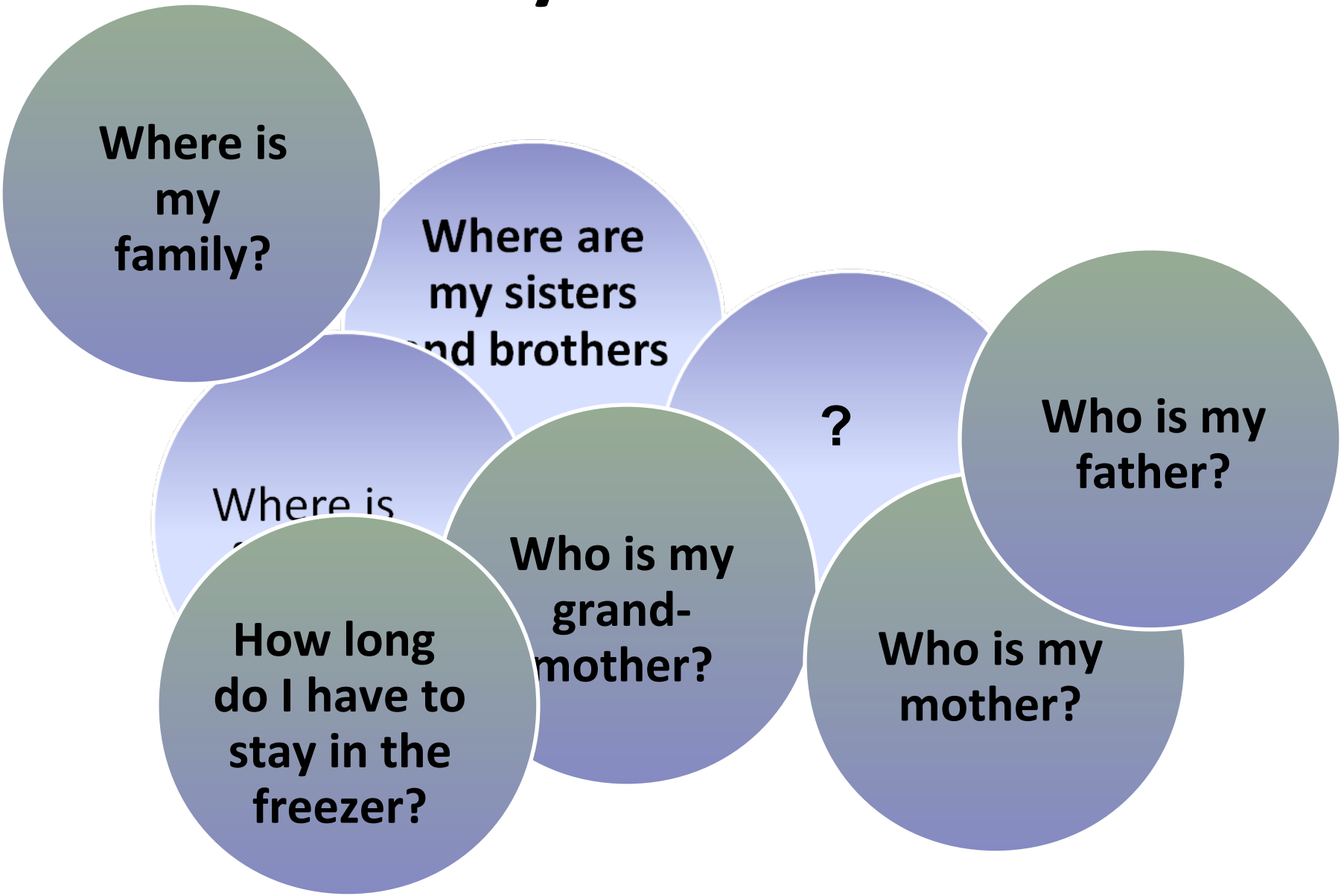
‘It is the duty of the physician in medical research to protect the life, health, privacy, and dignity of the human subjects.’ (Article 10).

Work in the IVF Clinic

1993 - 2007

In vitro - life & death

Goodbye in vitro …



Embryo is my little patient

NaProMedica – place of realisation

NaProMedica

Preliminary data
- first two years of work

Objective – **retrospective analysis of efficacy of treatment with natural methods in couples diagnosed with intertility**

Patients & Metods – **412 couples diagnosed and treated in NaProMedica (Bialystok, Poland) from January 2009 to November 2010 (more than one visit). Standard diagnostic procedures & CrMS (at least 3 months) & natural procreative support**

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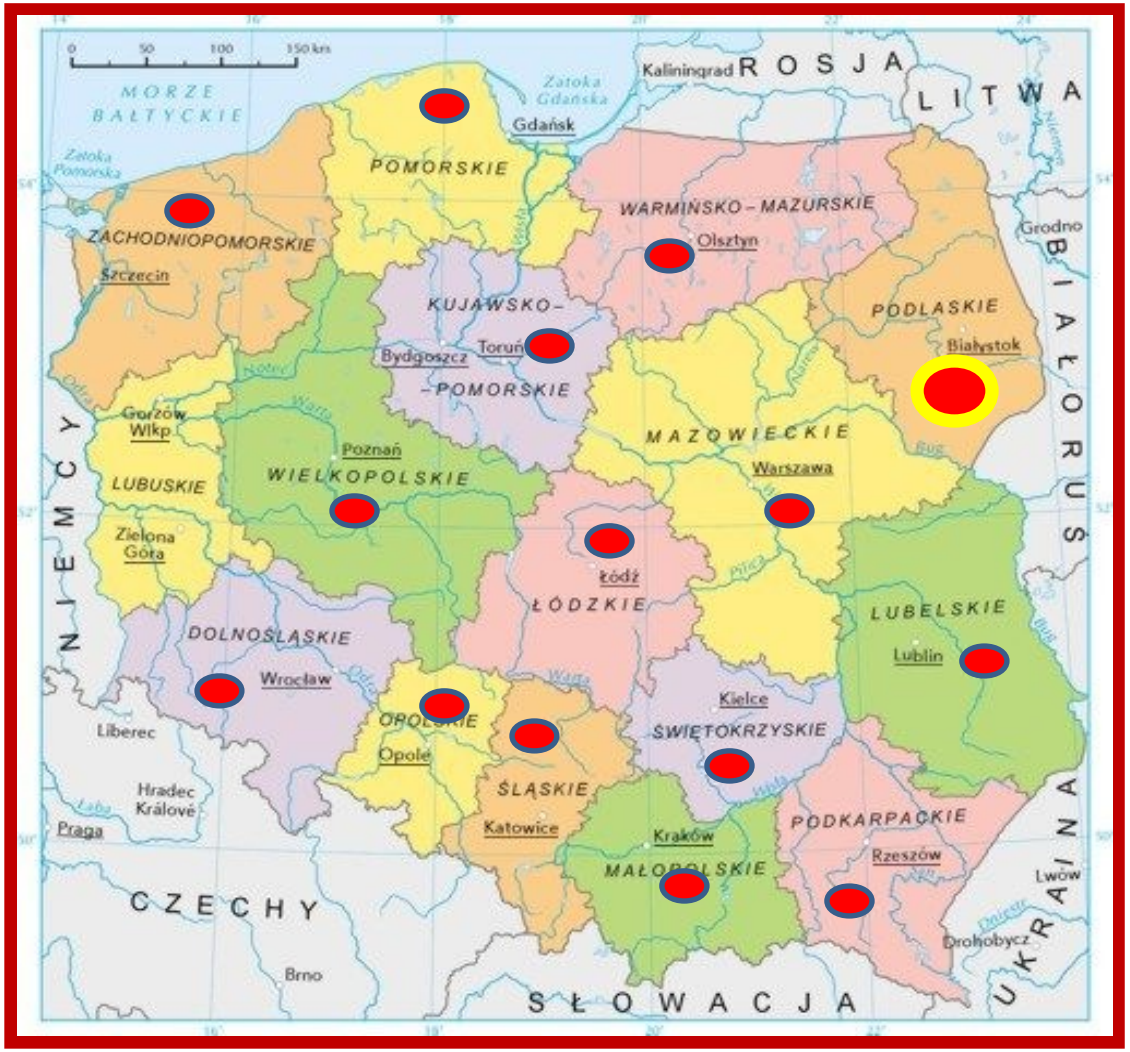
Patients characteristics

our patients come from all over Poland



& from

Germany
UK
Ukraine
Belarus

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Patients characteristcs (n=412)

	Female	Male
Age, years mean ±SD	33.7 ± 4.3	35.7 ± 6.0
(95% CI)	(33.3 – 34.1)	(35.1 – 36.3)
IQR	31- 37	31- 38

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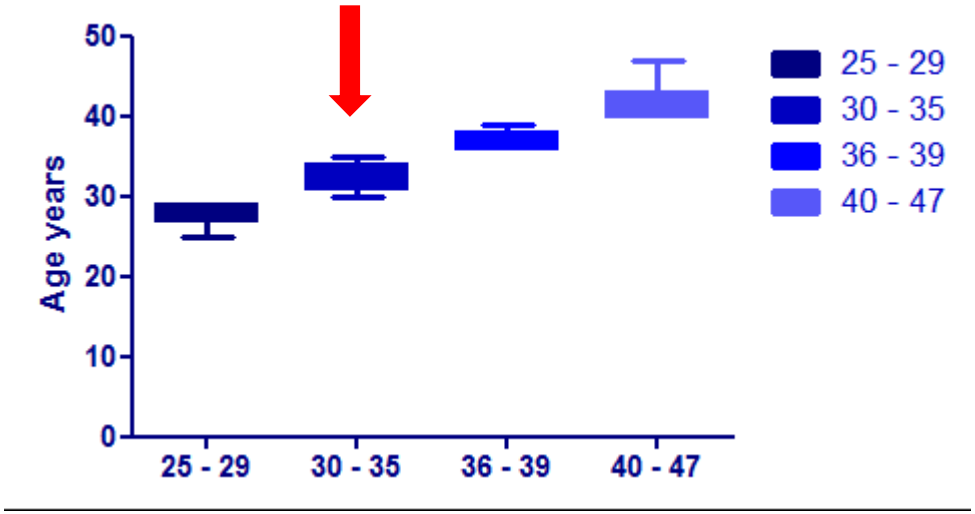
Female age sub-groups

25 – 29 y	30 – 35 y	36 – 39 y	40 – 47 y
N = 67	N = 216	N = 83	N = 46
27.9 ± 1.1	32.5 ± 1.7	37.3 ± 1.0	41.6 ± 1.9



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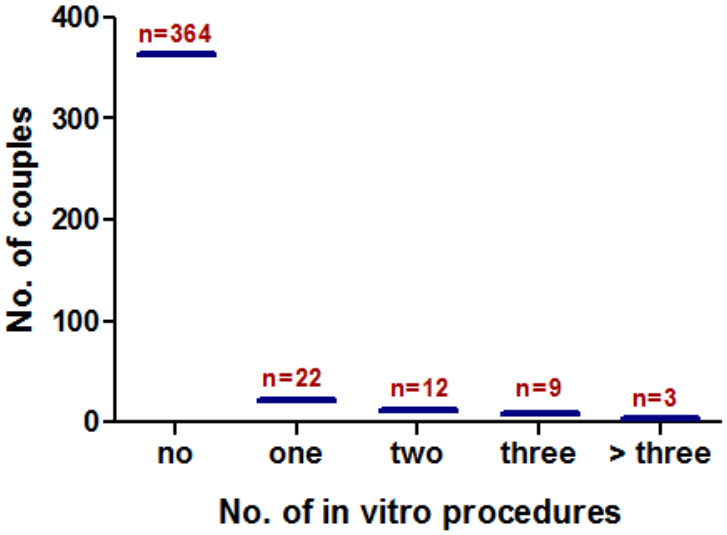
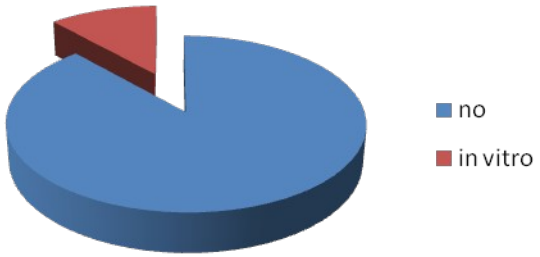
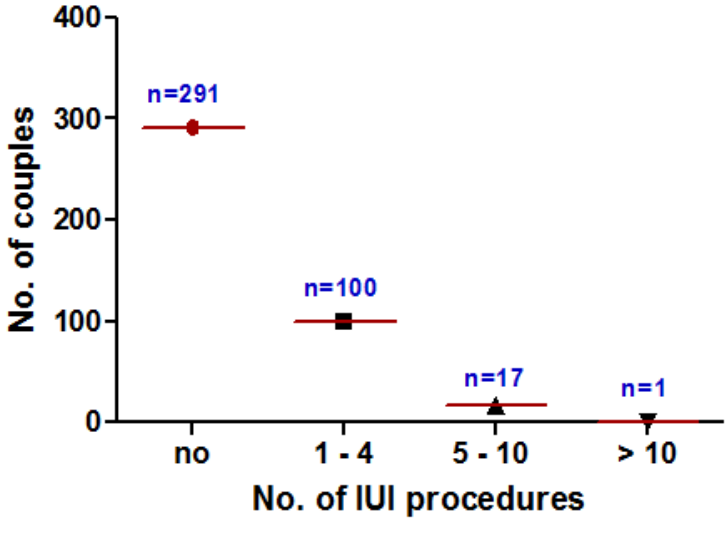
History of in vitro & IUI

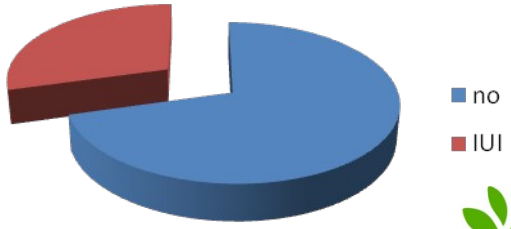


11.65%





29.37%



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Time of Infertility

Time	Mean±SD	95% CI	Median	Range
Before first visit (years)	**4.9 ± 3.3**	**4.6 – 5.2**	**4**	**2 - 21**

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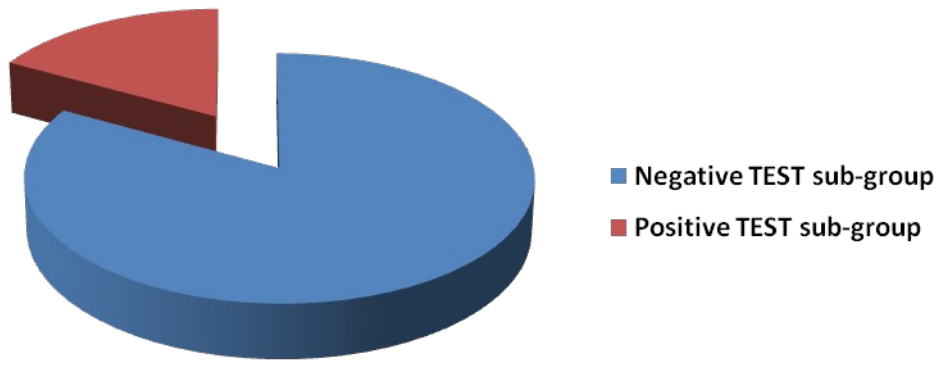
Time of treatment - in months

Time	Mean±SD	95% CI	Median	Range
In NaProMedica (months)	8.5 ± 6.3 (5.5)	7.9 – 9.1	8	2 -27
I group Positive TEST	6.6 ± 5.3	5.4 – 7.9	5	2 -24
II group Negative TEST (Test t; p=0.007)	8.9 ± 6.4	8.2 – 9.5	8	2- 27

70 / 412 – 16.99%



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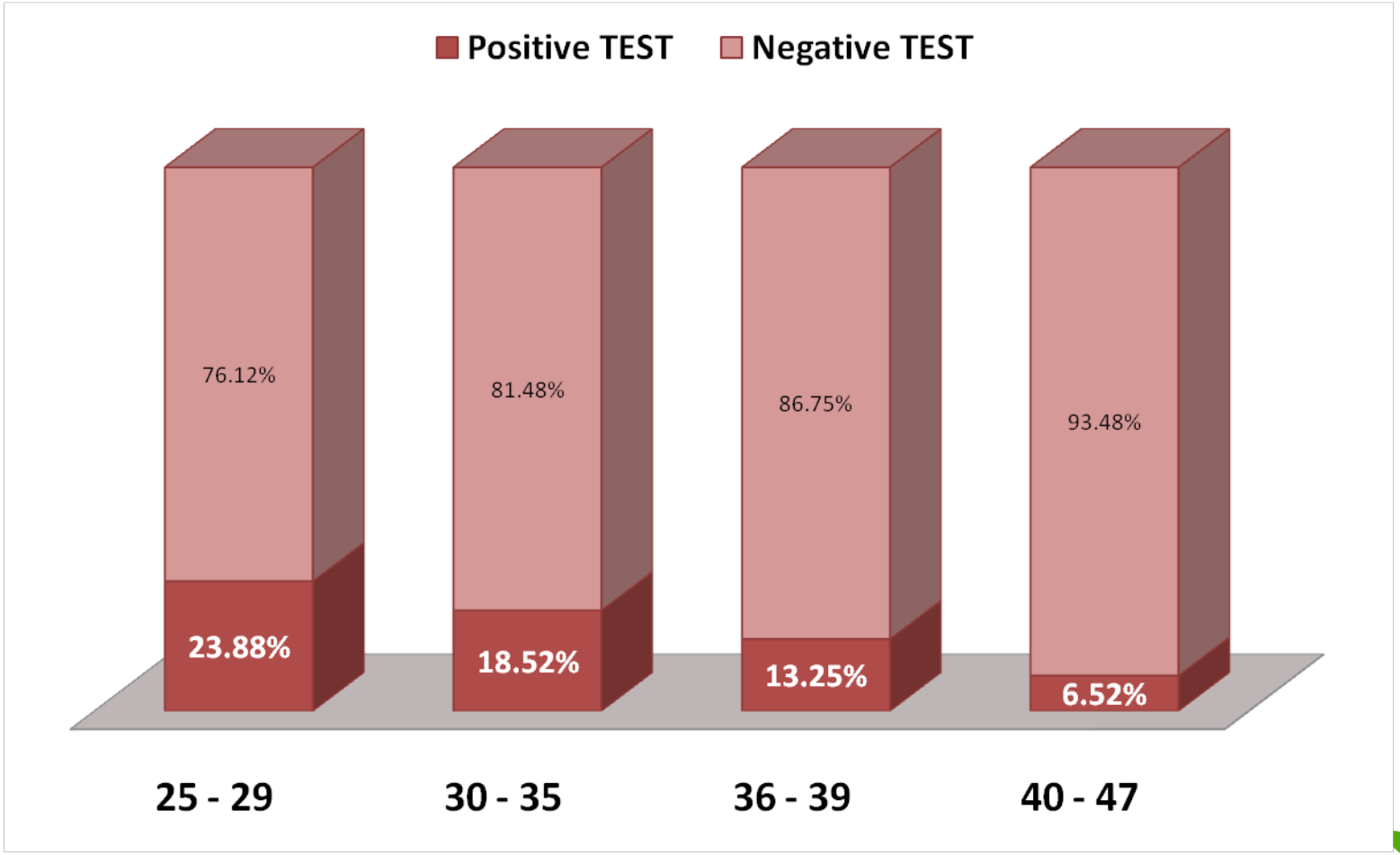
Positive TEST vs. Female Age Factor



Chi^2 Pearson p=0.07

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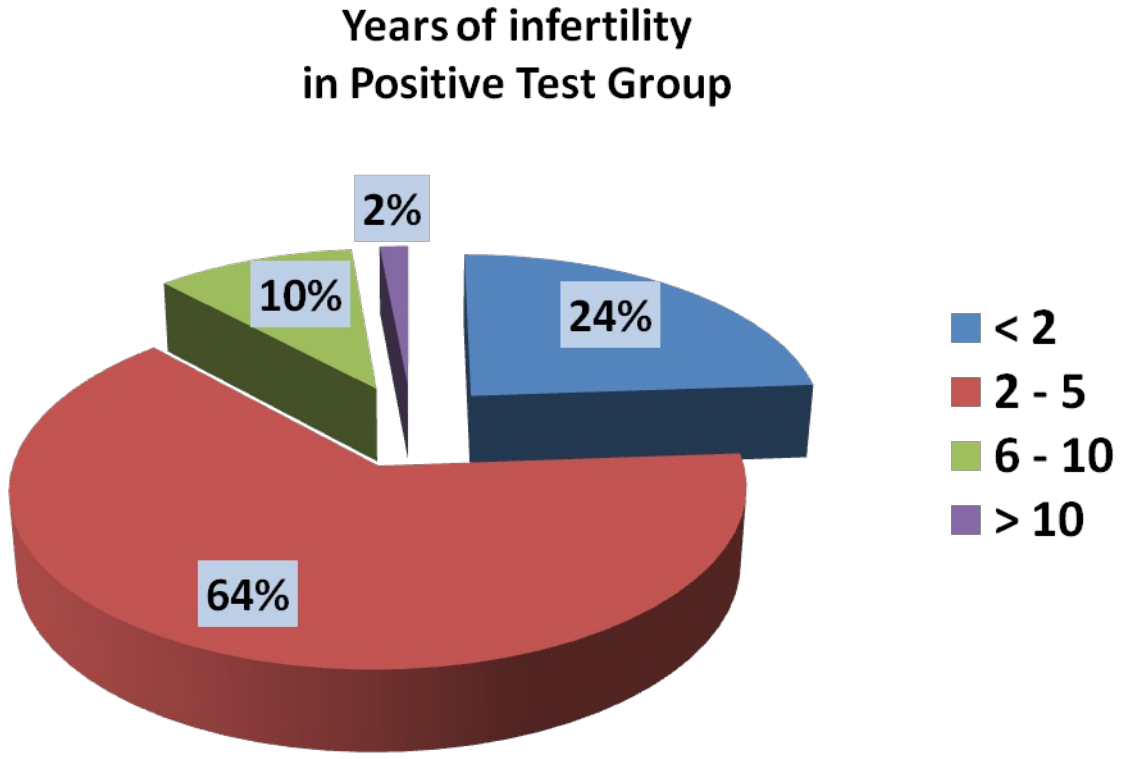
The highest efficacy - moderate infertility duration



χ^2 Pearson 26.53 df = 3 p<0.0001

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Preliminary data
- first two years of work

Results

- of total 412 couples 70 conceived (positive TESTS) (16.99 %)

- mean time of infertility – 4.9 ± 3.3 years
- mean time of the diagnostic procedures & treatment in NaProMedica - 8.5 ± 6.3 months

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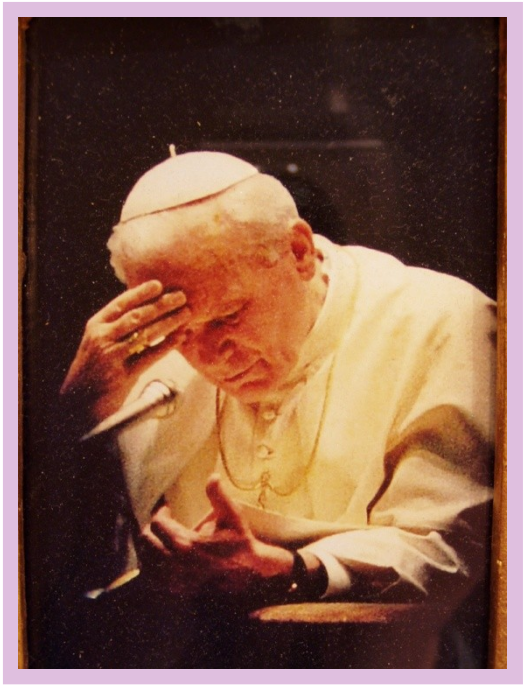

„Respect, protect, love and serve life, every human life!”

John Paul II - Evangelium vitae