Mannelijke onvruchtbaarheid: wat is mogelijk met geassisteerde vruchtbaarheidstechnieken?

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Sperma analyse

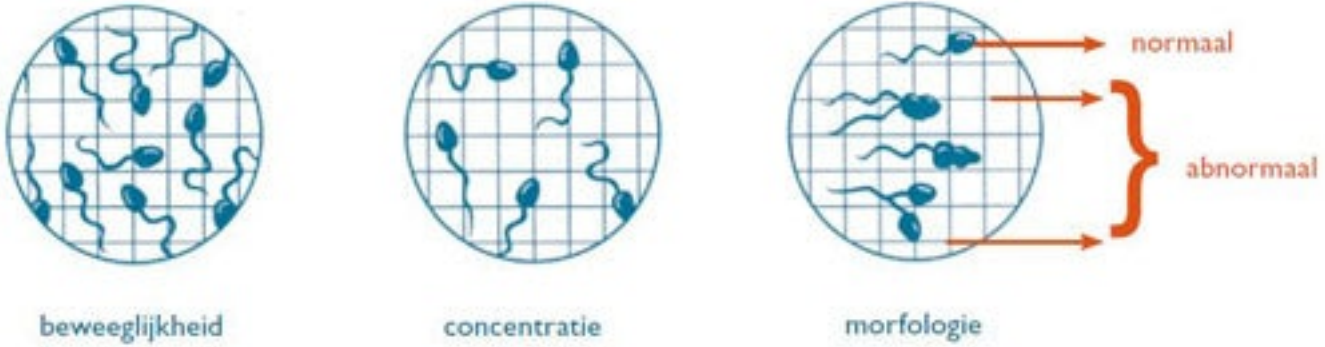
Table II Distribution of values, lower reference limits and their 95% CI for semen parameters from fertile men whose partners had a time-to-pregnancy of 12 months or less

	N	Centiles										
		2.5	(95% CI)	5	(95% CI)	10	25	50	75	90	95	97.5
Semen volume (ml)	1941	1.2	(1.0–1.3)	1.5	(1.4–1.7)	2	2.7	3.7	4.8	6	6.8	7.6
Sperm concentration (10^6/ml)	1859	9	(8–11)	15	(12–16)	22	41	73	116	169	213	259
Total number (10^6/Ejaculate)	1859	23	(18–29)	39	(33–46)	69	142	255	422	647	802	928
Total motility (PR + NP, %)*	1781	34	(33–37)	40	(38–42)	45	53	61	69	75	78	81
Progressive motility (PR, %)*	1780	28	(25–29)	32	(31–34)	39	47	55	62	69	72	75
Normal forms (%)	1851	3	(2.0–3.0)	4	(3.0–4.0)	5.5	9	15	24.5	36	44	48
Vitality (%)	428	53	(48–56)	58	(55–63)	64	72	79	84	88	91	92

*PR, progressive motility (WHO, 1999 grades a + b); NP, non-progressive motility (WHO, 1999 grade c).
The values are from unweighted raw data. For a two-sided distribution the 2.5th and 97.5th centiles provide the reference limits; for a one-sided distribution the fifth centile provides the lower reference limit.

Cooper TG et al., HRU 2010

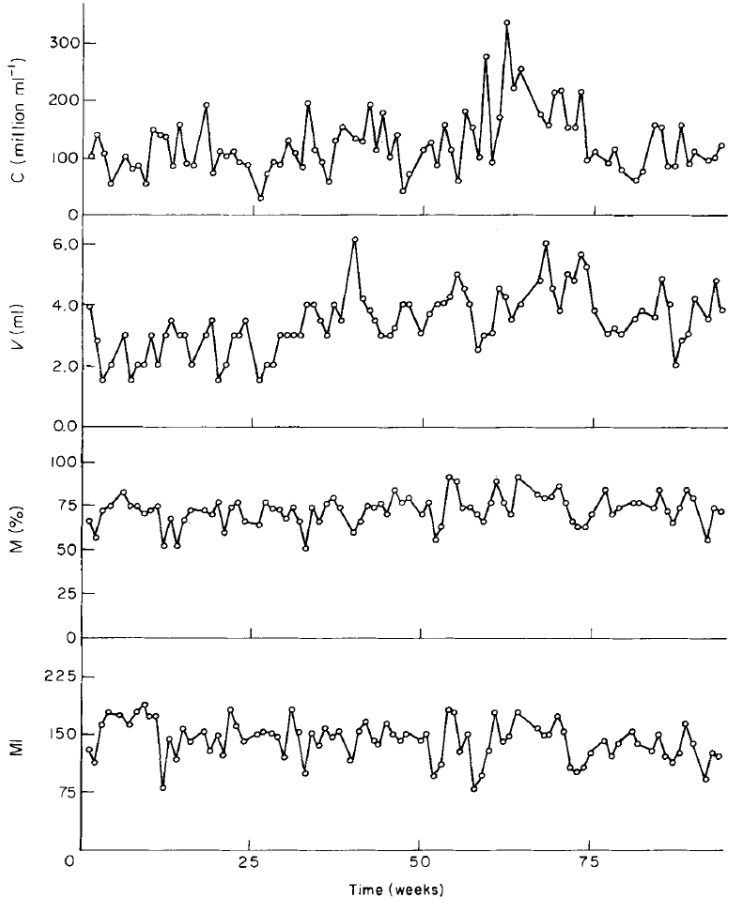
Sperma analyse



Sperma analyse

Table 2. One way analysis of variance: components of variance between- and within-subjects

	Total variance (percentage)	
	Between subjects	Within subjects
Sperm concentration (cube root transformed)	46	54
Ejaculate volume	41	59
Percentage motility	4	96
Motility Index	26	74

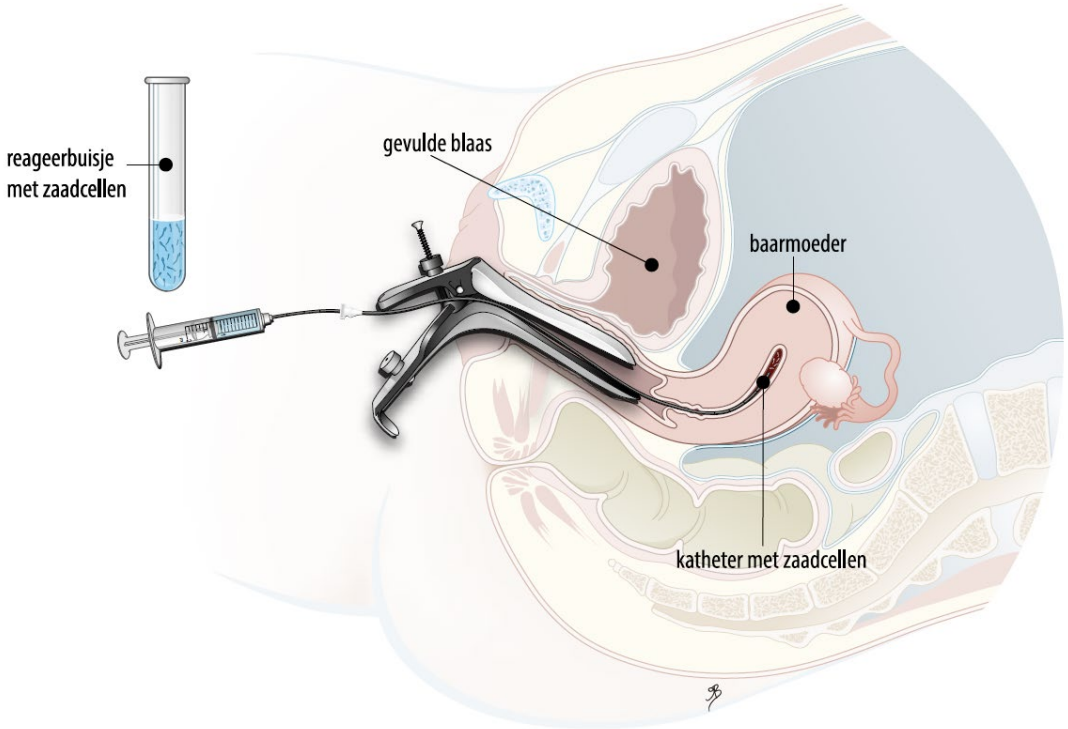


Mallidis C et al., Int J Androl 1991

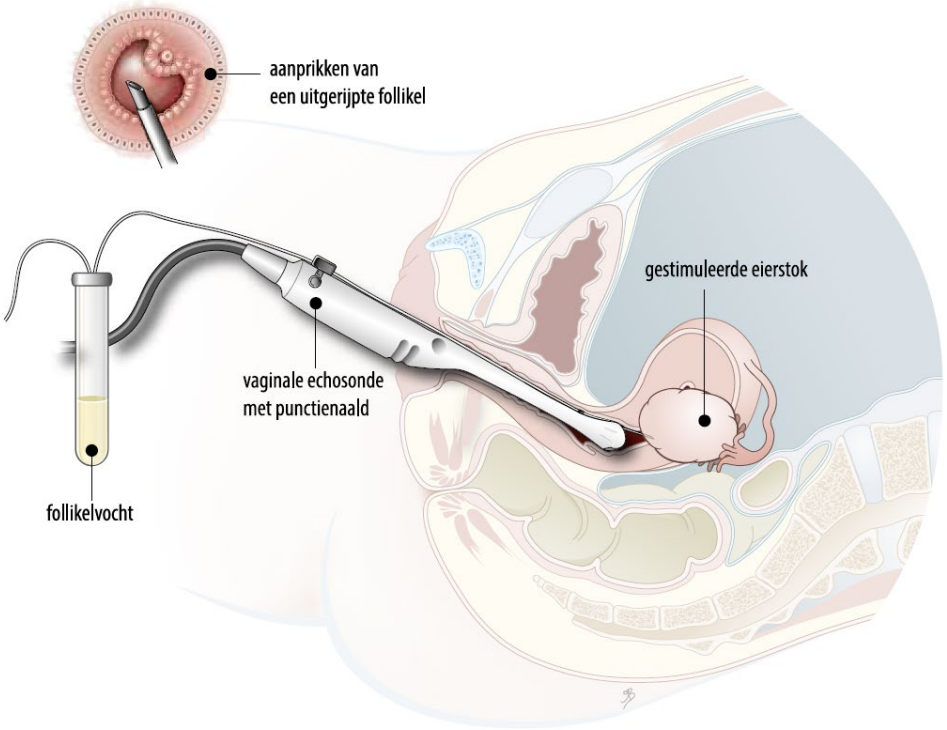
Behandelopties bij mannelijke subfertiliteit

- Intra-uteriene inseminatie (IUI)
- In vitro fertilisatie (IVF)
- Intracytoplasmatische sperma injectie (ICSI)

Intra-uteriene inseminatie (IUI)



IVF-ICSI





ivf-techniek



icsi-techniek

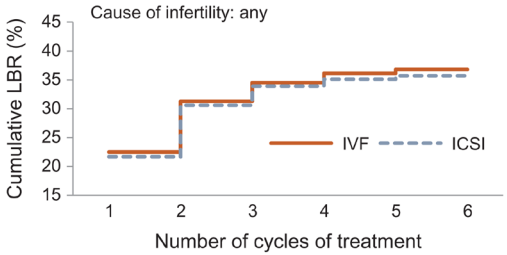
IUI, IVF of ICSI

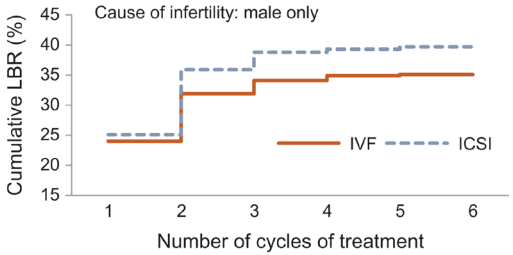
Prediction of IUI success in male subfertility	
Total mobility	>30%
Total mobile sperm count (volume * concentration * motility)	5-10 milion
Inseminating motile count (after sperm preparation)	1-2 milion

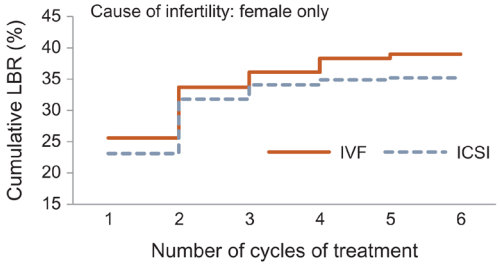
Ombelet W et al., RBMO 2014

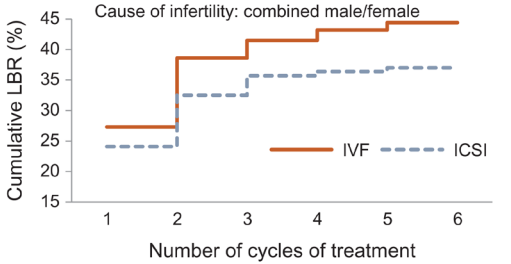


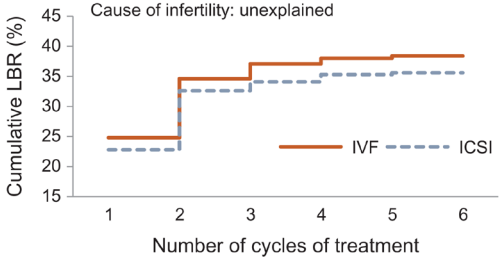
IUI, IVF of ICSI

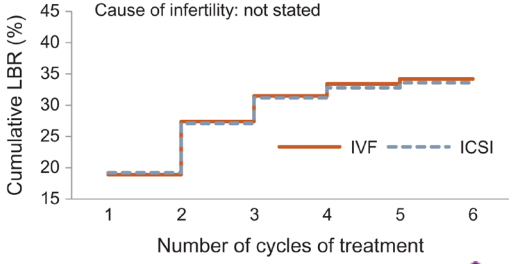






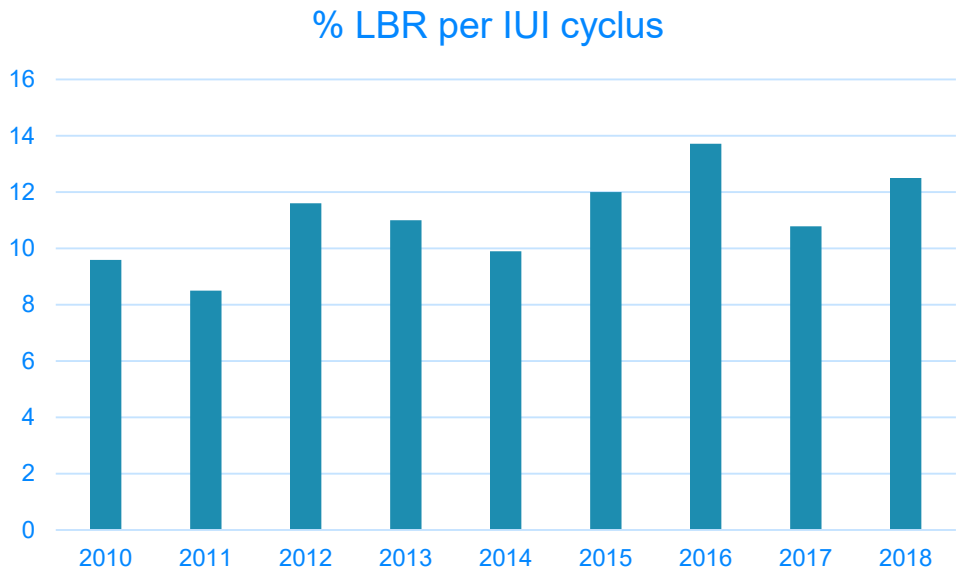




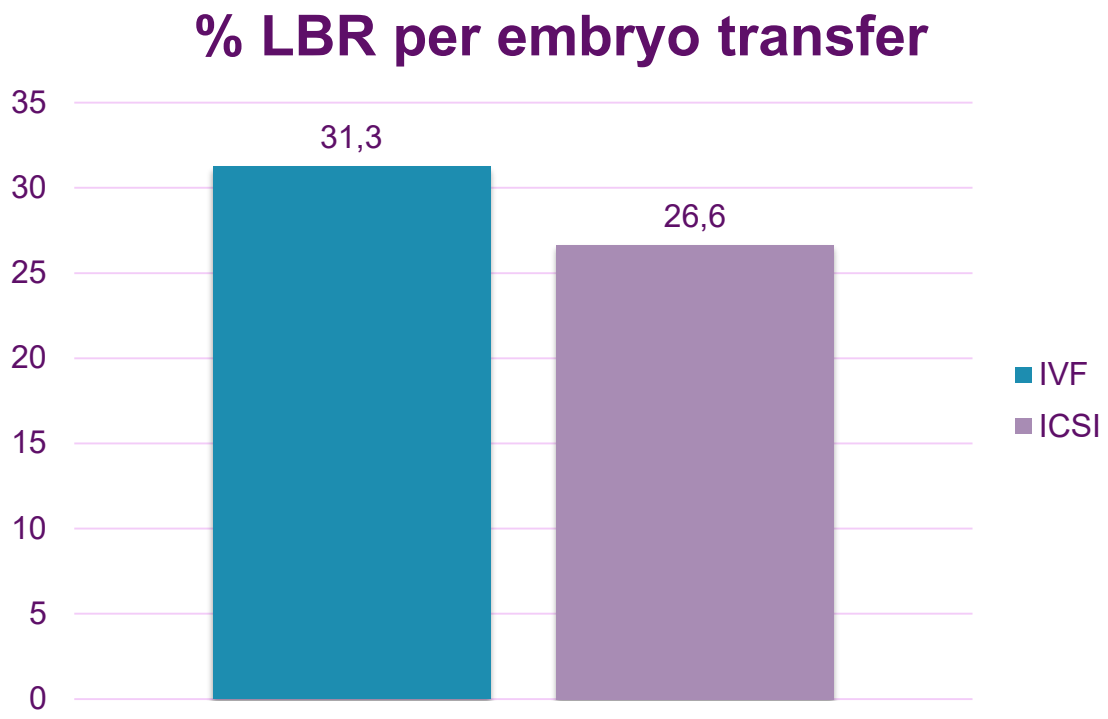


Li Z et al., Human Reprod 2018

Kans op een baby: IUI



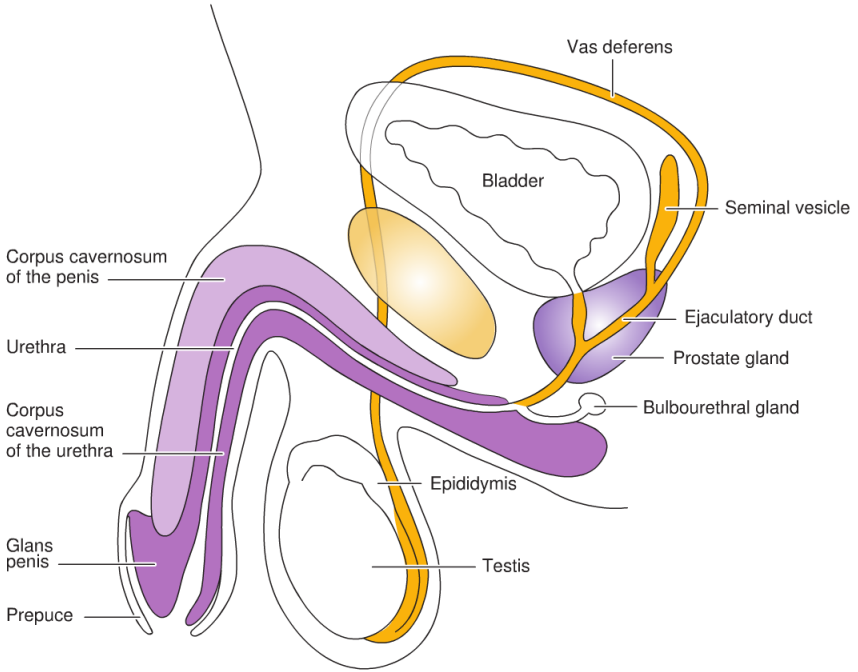
Kans op een baby: IVF-ICSI



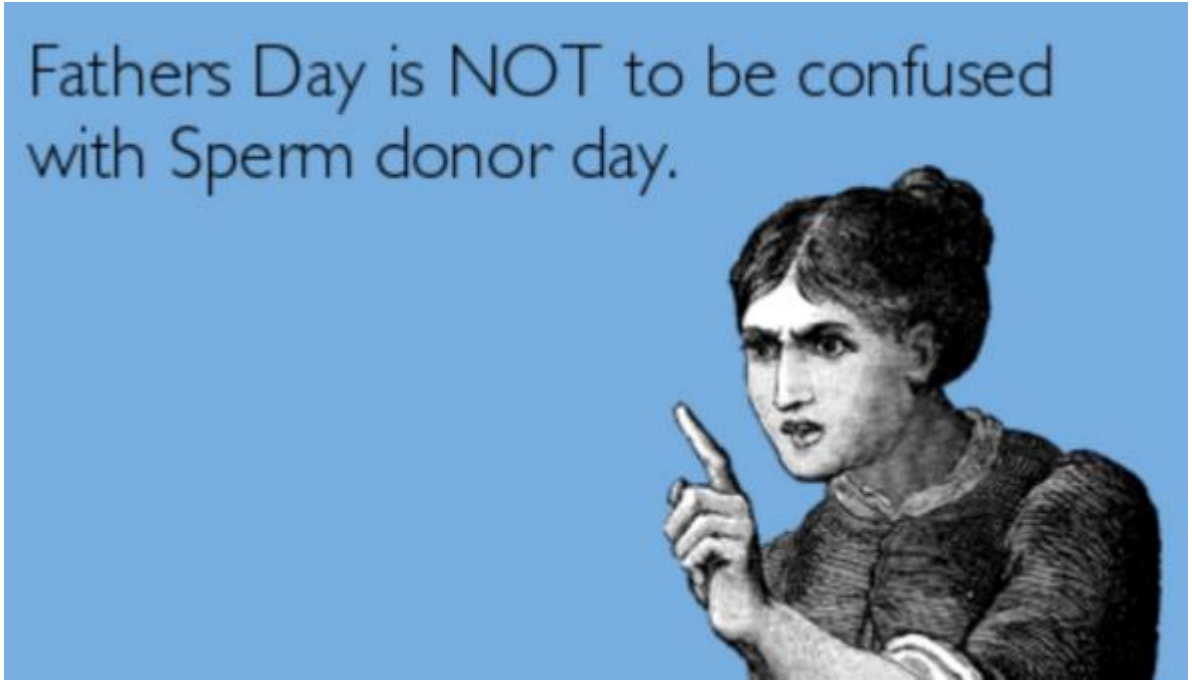


Azoöspermie

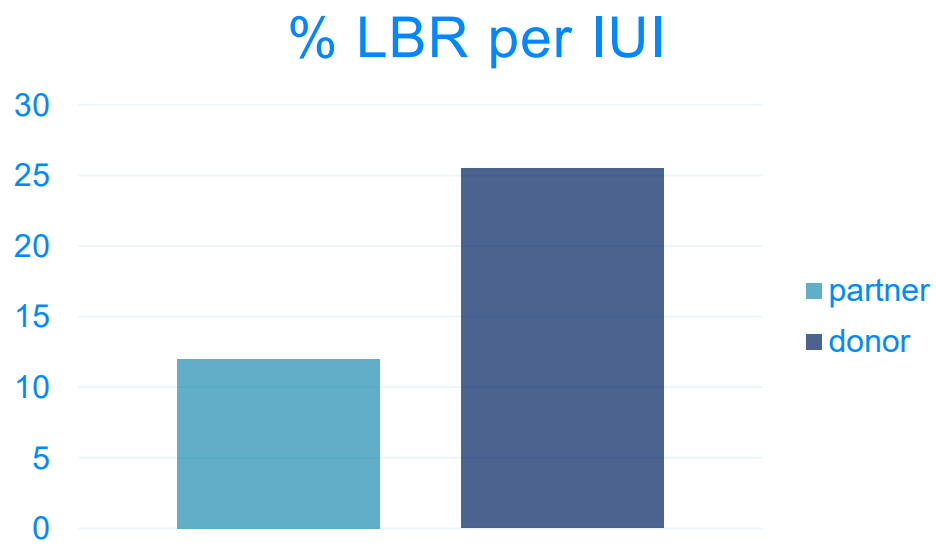
- Afwezigheid van zaadcellen in spermastaal
- Oorzaken
  - Obstructief
  - Niet obstructief



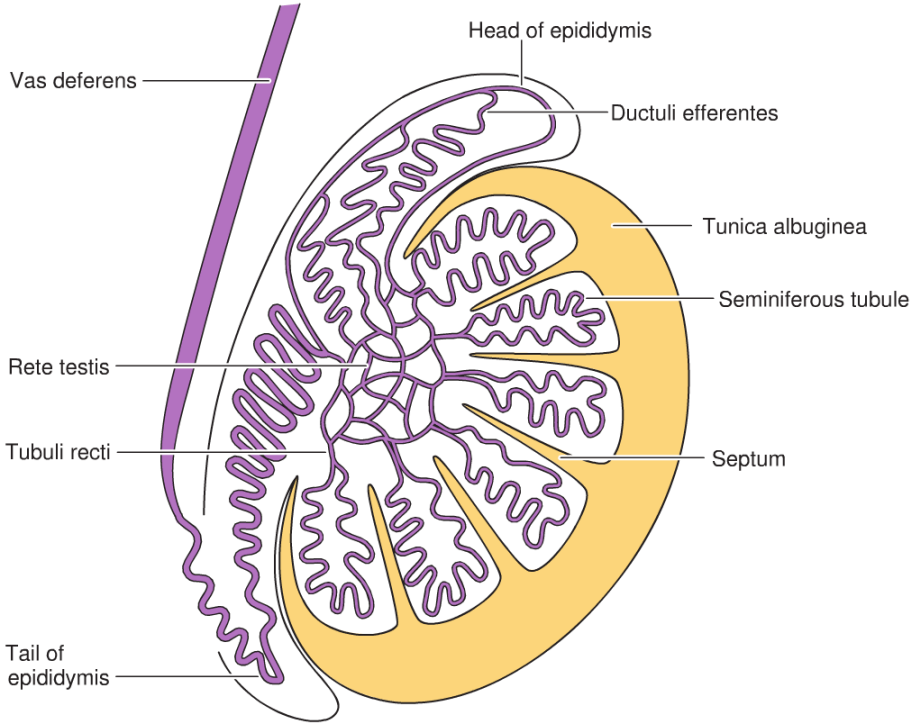
Donor sperma



Kans op een baby: IUI donor sperma



Testiculaire sperma extractie



Kans op een baby: IVF-ICSI TESE

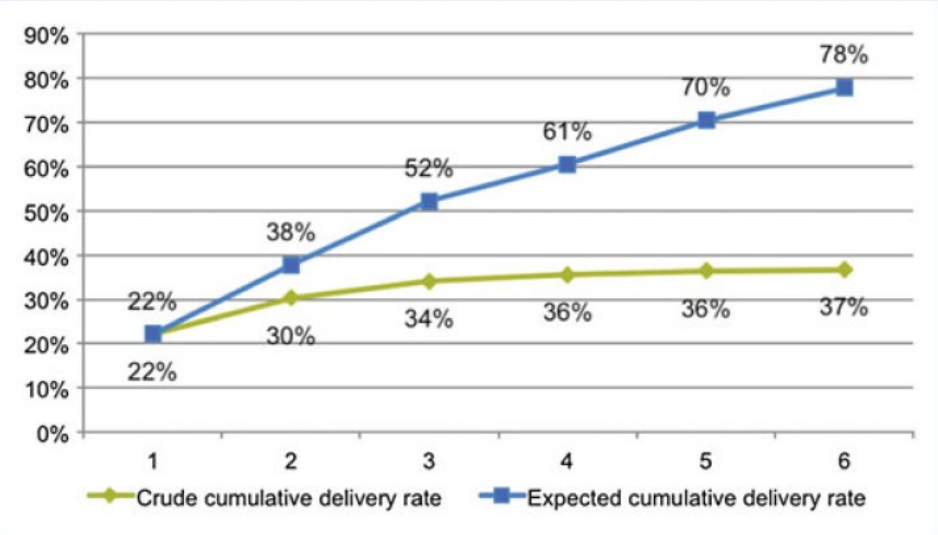
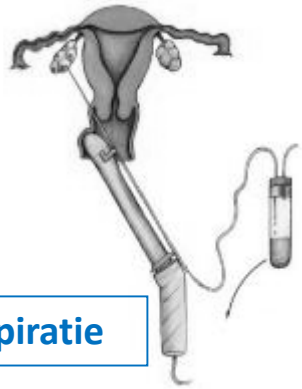


Figure 2 Crude and expected cumulative delivery rates in non-obstructive azoospermia patients.

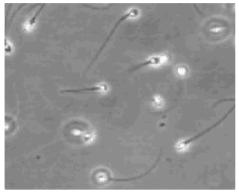
Vloeberghs V et al., HR 2015

Pre-implantatie genetische testing

Dag 0



Eicelaspiratie



Verwerking sperma

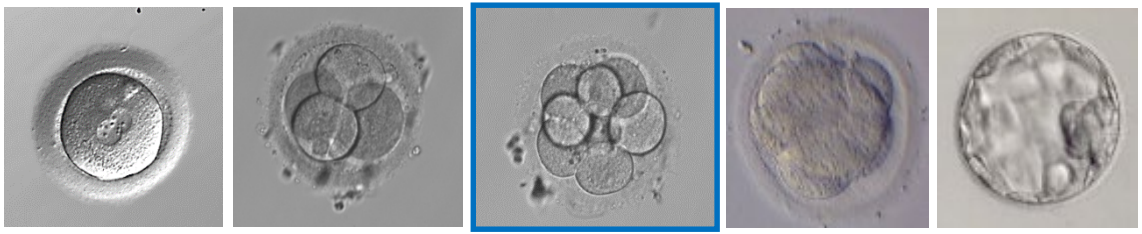
Embryo biopsie + tubing



ICSI



Dag 1 | Dag 2 | Dag 3 | Dag 4 | Dag 5/6



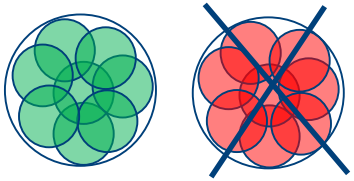
Embryo ontwikkeling en evaluatie

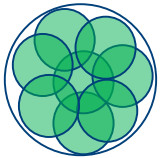
Pre-implantatie genetische testing



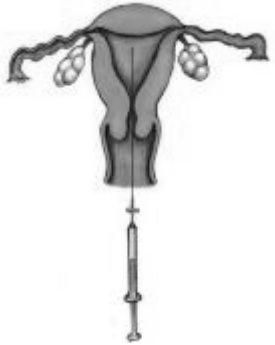
Embryo biopsie
+ tubing

Genetische analyse:





'genetisch normale' embryo's



Embryo transfer

Take home messages

- behandeling van het koppel
- counseling en ‘expectation management’