Human Embryonic Stem Cell Treatment
An Indian Perspective

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Confession
Specialist in fertility and IVF techniques
Five-step process
The accident
The accident repeated
Stem cells
Established stem cell lines
Regulations and guidelines
Continuous iteration
No ban
Recommendations may change with time
Enabling structure
Product acceptance and release criteria
IC-SCRT / NAC-SCRT
Records, no hype, scientific evidence
Data for over 1,200 patients
GLP, GMP and GCP certifications
Regulatory environment
Germany
Italy
The UK
China
The USA
National Institutes of Health Guidelines on Human Stem Cell Research
No specific legislation in Singapore
Singapore chimeras
What have I done differently?
Only one embryo
Non-chimeric
Treatment outcomes
Assessment standards and scales
Holistic, sensitive and workable score
Some cases
26-year old male
26-year old male

2 June 2011

11 November 2011
26-year old male

19 June 2012

16 July 2012
26-year old male

2 June 2011 — 16 July 2012
25-year old male
25-year old male
25-year old male
25-year old male

Before

After
46-year old male
46-year old male

8 November 2011

3 January 2012
46-year old male

7 March 2012

6 November 2012
46-year old male
45-year old female

Day 2

Day 10
45-year old female

Day 19

Day 26
45-year old female

Day 1

Day 26
Ready-to-use form
International patent
Easy clinical application
Incurable and chronic conditions and illnesses
Treatment protocol developed over the years
30% are doctors,
30% from 36 countries
Towards commercialisation
Virtual patent ban in the EU
How can innovation come from the third world?
Two basic questions
When does a developing embryo become human?
Questions only for hESC research and treatment
No problems with IVF
Wastage of nearly 1.7 million embryos in the UK
Termination of pregnancy
Morning-after pill acceptable
Safe and efficacious therapeutic effects
No matching, no testing
First line of treatment for many of mankind’s worst afflictions
Cogent, unblinkered policy framework
What lies ahead is still not firm and final
Review, accept and adapt
Thinking of the patient first
No more Savitas
Death triumphed where life should have
It is time we acted
Thank you!