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Live births after IVF in men with a DNA fragmentation index of 30% or greater as determined by the Sperm Chromatin Structure Assay (SCSA™). F. Barnes, F. Rabara, A. Murphy, C. Zouves. Zouves Fertility Center, Daly City, CA.

OBJECTIVE: Evaluate the implantation and birth frequency in couples where the male partner had a DFI of $\geq 30\%$.

DESIGN: Retrospective review of IVF cycles with a DNA fragmentation index (DFI) $\geq 30\%$.

MATERIALS AND METHODS: Semen samples provided by men undergoing IVF were subjected to SCSA™ testing within 0–180 days of IVF. Samples were produced by masturbation into specimen cups (Mckesson Medi-pak #37–2469P) and processed within 15–300 minutes. Samples were evaluated for count and motility and frozen neat and stored for one to fourteen days in liquid nitrogen Dewars. Frozen samples were sent to SCSA™ Diagnostics, Inc, Brookings, SD for testing. Results were available within 7 days. Men with a high DFI ($\geq 30\%$) were advised to use Fertility Blend™ supplement for men and couples were counseled to add an additional embryo to the transfer if available. *In vitro* fertilization (IVF), embryo culture and embryo transfer were performed by processes standard to the industry. Sperm donation was not suggested as an option for IVF treatment. Data presented includes men with DFI's $\geq 30\%$, pregnancy and birth data where derived from only the first cycle following SCSA testing. Data is grouped in thirty-day intervals from SCSA testing to egg recovery.

RESULTS: Men with high DFI's were consistently able to produce healthy children following *in vitro* fertilization regardless of the time of testing to egg retrieval.

Days from SCSA	Egg Retrievals	Clinical Pregnancy ¹ (%)	Embryos Transferred (average)	Sacs (fetal sacs/embryos transferred)	Babies	Selective Reduction ²	Average Egg Age \pm SD	Average DFI \pm SD
0 - 30	16	6 (38)	60 (3.8)	16 (27%)	9	5	33.8 \pm 6.4	42.1 \pm 8.8
31 - 60	20	11 (55)	62 (3.1)	25 (40%)	16	1	36 \pm 4.6	43.2 \pm 12.1
61 - 90	6	2 (33)	18 (3.0)	2 (11%)	2	0	32.6 \pm 9.9	39.0 \pm 12.2
91 - 120	9	4 (44)	36 (4.0)	5 (14%)	4	0	32.6 \pm 8.6	36.8 \pm 9.6
121 - 180	8	6 (75)	29 (3.6)	11 (38%)	7	0	32.1 \pm 9.0	36.4 \pm 10.8
Total	59	29 (49)	205 (3.5)	59 (29%)	38	6		

1: Clinical pregnancy defined as the presence of a fetal sac at 6 weeks. 2: Sacs electively terminated prior to birth. Added note: three patients with DFI's $\geq 50\%$, within 4 and 59 days of egg retrieval produced 7 healthy children following IVF.

CONCLUSION: The data presented is in contrast to reports that a DFI $\geq 30\%$ strongly predicts a male patient's inability to produce a sustained pregnancy. Fertility Blend™ supplement for men contains L-Carnitine and other antioxidants that may have led to reduced and improved DFI scores by the time of IVF. Men with an initial DFI $\geq 30\%$ should not move immediately to sperm donation when attempting to father a child by IVF.

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