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# Aneuploidy and sperm DNA fragmentation of sperm in men with abnormal spermatogenesis

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**Background/Aim:** Aneuploidy and DNA fragmentation level evaluation of spermatozoids of males with idiopathic infertility.

**Materials and Methods:** We study investigated chromosomal aneuploidies and DNA damage in spermatozoa from male patients in seminal plasma. Sperm aneuploidy and diploidy was assessed using multicolor FISH (DNA probes specific for chromosomes X, Y, 18, 13, 21(Vysis Multi Vysion PGT,Abbot Molecular)). Sperm DNA fragmentation was assessed by method of SCD (sperm chromatin dipersion, Spermprocessor, India) using fluorescent microscope Axioscope 40. To calculate DNA fragmentation index not less than 500 spermatozoids were examined

**Results:** During research of spermogram, characteristics dependence on DNA fragmentation of sperm among the patients who were defined to have more spermatozoids in fragmented DNA, patients with asthenozoospermia SFD -40.0±2.15, with oligospermia 27.5±2.31, with theratospermia 32. 5±1.50. In control group of patients' amount of spermatozoids with damaged DNA is much higher ($p > 0.05$) at patients with bad index of spermogram comparing to the patients with normospermia. Men with oligo asthenozoospermia had a greater percentage of sperm aneuploidy (58%) and men with asthenozoospermia had a percentage of sperm aneuploidy (49%) men with theratospermia had a percentage of sperm aneuploidy (41%) compared with men with normal semen parameters.

**Conclusions:** As a result, in the process of research patients with male infertility have DNA fragmentation 40.0 % in average. A total of 40% of men with oligo asthenozoospermia and asthenozoospermia had a greater percentage of sperm aneuploidy compared with men with normal semen parameters.

## Biography

Svetlana Duisenbayeva- head of laboratory at "The Research Center of Urology named after B.U. Dzharbussynov". She graduated Kazakh National University, with the major-biochemistry, in 1992. In 1993, she continued her education in the sphere of clinical laboratory diagnostics; it allowed her work in medical laboratories. Currently, as it was mentioned above, she work as a head of laboratory at "The Research Center of Urology named after B.U. Dzharbussynov". Her laboratory performs not only basic functions, it also conducts scientific researches. Nowadays, The Research Center of Urology makes a research about male infertility and its reasons on the genetic level.

She always try to bring something new to the laboratory, and she hope that Molecular Medicine Conference will show new opportunities and ideas for the future development of the laboratory.

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