3-DIMENSIONAL ENDOMETRIAL VOLUME AS A PREDICTOR OF PREGNANCY IN IN-VITRO FERTILISATION CYCLES OVER 2-DIMENSIONAL ENDOMETRIAL THICKNESS. M. Gupta, N. Singh, N. Malhotra, R. Mahey, P. Vanamail, S. Pant. All India Institute of Medical Sciences, New Delhi, India.

OBJECTIVE: To evaluate the role of endometrial volume as predictor of pregnancy in In Vitro Fertilisation Cycles (IVF) over endometrial thickness.

DESIGN: Prospective, non randomised clinical study.

MATERIALS AND METHODS: This was a prospective observational study. A total of 100 infertile women were recruited from our IVF-Embryo transfer program from Feb to March 2014. Endometrial volume was measured on the day of hCG using the VOCAL (Virtual Organ Computer-aided AnaLysis) imaging program integrated into Volusen E8 ultrasound system.

RESULTS: The mean age was 31.5 years and the mean duration of infertility was 6 years. The mean endometrial thickness was 9.7 mm and the mean endometrial volume was 4.6 cm3. Overall 31(31%) patients conceived and in these women the endometrial volume was between 3-8 cm3. All patients who conceived had thickness more than 7 mm. 38 (38%) patients had thickness >7 mm but endometrial volume < 4 cm3 and did not conceive. The positive predictive value of endometrial volume for conception was 40% with sensitivity as high as 93.5%. Endometrial thickness had a high negative predictive value of 68.3% with 97% specificity. Among those who conceived 16 (51%) patients had blood flow in Zone 3, 14 (45%) patients had flow in Zone 2 and only one had flow in Zone 1.

CONCLUSION: With a thin endometrium and low endometrial volume, the probability of conception is very low in an in-vitro fertilisation/ embryo transfer cycle and cryopreservation should be recommended. Endometrial thickness more than 7 mm and volume more than 3cm3 together increase the probability of pregnancy more than thickness alone as volume is an objective measure of implantation potential of endometrium. However furthur study is needed for definitive conclusion.

EVALUATION OF SPERM DNA INTEGRITY AND ITS EFFECT ON EMBRYO DEVELOPMENT USING TIME-LAPSE MICROSCOPY. T. Lundberg, F. Hambiliki, F. Sondèn, E. Akerlund, M. Bungum. Reproductive Medicine Centre, Skanes University Hospital, Malmö, Sweden.

OBJECTIVE: To examine whether there are any correlation between the degree of sperm DNA fragmentation as measured with Sperm Chromatin Structure assay (SCSA) and early embryo development assessed by time-lapse microscopy.

DESIGN: The study was performed in a retrospective manner in the setting of a university hospital clinic.

MATERIALS AND METHODS: The study included 642 oocytes from 107 couples treated with Intracytoplasmatic Sperm Injection (ICSI). Embryos were cultured in a Embryoscope (time-lapse system), with 6% CO_2 and 5% O_2 for a maximum of six days. All annotations for each zygote/ embryo were performed in regard to predefined morphokinetic events. The semen sample was collected at the day of oocyte aspiration and the degree of DNA fragmentation was assessed using the SCSA. The percentage of denatured, damaged DNA was expressed as DFI (DNA Fragmentation Index). Oocytes/embryos were categorized into four different groups according to DFI value (0-10%; 10.1-20%; 20.1-30% and >30%). The endpoints were fertilization rate as well as time for: i) extrusion of second polarbody (2PBe); ii) pronuclei appearance (PNa); iii) pronuclei fading (PNf); iv) early cleavage (t2); v) blastocyst development (tB) and vi) blastocyst rate. Mean values for all parameters were tested in a linear regression analysis model with the respective parameters as dependant and the four DFI categories as independent factors. Statistical analysis was performed using statistical software (SPSS 17.0 for Windows; SPSS Inc., Chicago,IL). A p-value of less than 0.05 was considered statistically significant.

RESULTS: For all endpoints; rate of 2PN, 2PBe, PNa, PNf, t2, tB and blastocyst rate the mean numbers were equal between all four DFI groups. No statistical differences between groups were detected.

CONCLUSION: Neither rate of 2PN, 2PBe, PNa, PNf nor embryo development as assessed by time-lapse microscopy are related to degree of sperm DNA fragmentation as measured by SCSA.

THE EFFECT OF PERCEIVED QUALITY OF LIFE ON PHYSICAL, EMOTIONAL, SOCIAL, RELATIONAL SITUATIONS IN WOMEN WITH FERTILITY PROBLEMS. A. S. Ugur,[a] H. Erten Yaman,[b] M. Aygun.[b] [a]Department of Infertility and Invitro Fertilization, Florence Nightingale Hospital, Kadikoy, Istanbul, Turkey; [b]Health School, Department of Nursery, Istanbul Bilim University, Sisli, Istanbul, Turkey.

OBJECTIVE: The aim of this study was to investigate the effect of reproductive problems of women who were under the treatment of infertility on their physical, emotional, social, relational life by using a relational screen model.

DESIGN: The study was done at Florence Nightingale Hospital IVF Center between the dates of 21st March-31st July 2013. Ninety women who were diagnosed as infertility voluntarily joined to our study. All of the women were married and they have a basal education level as a graduate of primary school. Therefore, there were capable of participating the study and achieving a good communication.

MATERIALS AND METHODS: The data was collected by using a Statement Form that was prepared according to the literature and clinical experiences and FertiQoL Quality of Life Questionnaire (FERTIQOL) 2008, approved by an availablitiy-safety test. Statistical evaluation was done by using SPPS 17.0 package program.

RESULTS: Mean age of the study group was 33.96 + 5.38. Demographic evaluation also revealed that 65.6% of these patients were living in a city, 58.9% of them were working and 23.3% have no previous infertility treatment. It was the first attempt of IVF treatment for 48.9% of those women. Almost half of these patients (51.1%) described a kind of pressure. They claim that the main part of pressure they feel was self-dependent. The highest quality of life score in core module, relational sub-scale was 79,21 and in treatment module, environment sub-scale was 80.23. The lowest life quality scores were recorded for emotional sub-scale as 62.96. The relation between the individual FertiQol sub-scale scores and age was not statistically significant. However, relations between the consistency of pressure feeling caused by a fertility problem and emotional, mind-body and social sub-scale were statistically significant.

CONCLUSION: Our results revealed that individuals with fertility problems and under IVF treatment need professional counseling to having a better quality of life.

DAIRY INTAKE IN WOMEN AND IN VITRO FERTILIZATION OUTCOMES. M. C. Afeiche,[a] A. J. Gaskins,[a] P. L. Williams,[b] T. L. Toth,[c] D. L. Wright,[c] R. Hauser,[d] J. E. Chavarro.[a] [a]Department of Nutrition, Harvard School of Public Health, Boston, MA; [b]Department of Biostatistics, Harvard School of Public Health, Boston, MA; [c]Vincent Obstetrics and Gynecology, Massachusetts General Hospital and Harvard Medical School, Boston, MA; [d]Department of Environmental Health, Harvard School of Public Health, Boston, MA.

OBJECTIVE: To examine the relation between dairy intake in women and assisted reproductive technology (ART) outcomes.

DESIGN: Prospective cohort study.

MATERIALS AND METHODS: Women in subfertile couples presenting for evaluation at the Massachusetts General Hospital Fertility Center were invited to participate in an ongoing study. Diet was assessed before ART treatment using a validated food frequency questionnaire. ART outcomes included controlled ovarian hyper-stimulation outcomes (estradiol levels, overall and mature oocyte yields), fertilization rates, embryo quality, and clinical outcomes (implantation, clinical pregnancy, and live birth). We used generalized linear mixed models with random intercepts to account for multiple ART cycles per woman. Crude models were adjusted for age and calorie intake. Full models were adjusted for age, calorie intake, BMI, race, smoking status, infertility diagnosis, protocol type, and dietary patterns. We conducted a sensitivity analysis restricting to ART cycles started within 18 months of completing the FFQ.

RESULTS: Dairy intake was not related to peak estradiol, total or mature oocyte yield, fertilization rates, or embryo quality. Dairy intake was associated with higher live birth rates in crude models. The adjusted difference (95% confidence interval (CI)) in live birth rate between women in the highest (>3.0 servings/day) and lowest (<1.34 servings/day) quartile of dairy intake was 21% (9-32%). This association was attenuated after adjustment for other potential confounders. In the fully adjusted model, the adjusted