Two articles in this issue discuss the relevance of sperm DNA fragmentation on the outcome of ART. DNA fragmentation was assessed by alkaline single-cell gel electrophoresis (Comet) assay with or without modified bases on semen and processed sperm of 230 IVF and 130 ICSI cycles. Outcome parameters included fertilization parameters, clinical pregnancy and pregnancy loss. In IVF there was a negative correlation between DNA fragmentation and fertilization parameters and clinical pregnancy. In ICSI there was a higher DNA damage in the group who did not achieve pregnancy. Test sensitivity was increased when modified Comet assay was used. (p. 1594) DNA fragmentation index (DFI) on processed sperm was done in 192 IVF cycles and 155 ICSI cycles. The continuing pregnancy in ICSI was negatively correlated with the DFI and the threshold value seems to be around 19%. No threshold value was observed after IVF. Authors suggest that their study may resolve some of the issues on how and to what extent sperm DNA damage has an impact on IVF and ICSI success rates. This conclusion requires, however, further validation (p. 1609).

Repeated fertilization failure is a rare event since the development of ICSI. An article describes the case of an infertile couple who failed repeatedly IVF and ICSI. The sperm of the husband had normal morphology and was able to activate mouse oocytes. Artificial activation of oocytes with calcium ionophore or the use of donor sperm had no effect. Careful evaluation of the oocytes which failed to fertilize pointed in the direction of a cytoplasmic defect in the oocytes as the primary cause of the couple’s infertility which was resolved using ICSI with the husband’s sperm on donor oocytes; healthy twins have now been born (p. 1666).

Does metformin add benefit over standard treatment in infertile patients with PCOS and what is the best first line treatment for women with PCOS-related ovulation dysfunction are two relevant research questions. A multi-centre RCT was done in 171 women. Depending on the BMI (cutoff 32), the treatment arms were placebo or metformin in the high BMI group and clomiphene (CC), metformin or CC + metformin in the low BMI group. Patients were followed for 6 months or until confirmation of pregnancy; primary outcomes were clinical pregnancy and live birth. Study indicated that low outcome was achieved in the high BMI group and that overall there was no benefit of adding metformin in the treatment (p. 1675).

Vitrification of oocytes and embryos is a relatively novel approach and uses high concentrations of cryoprotectants. Influence vitrification procedures on children’s health is therefore a valid question to be answered. A single centre assessed the obstetric and neonatal outcome in the first 106 children born after transfer of vitrified blastocysts and compared the outcome to children born after transfer of non-preserved blastocysts and frozen-thawed cleavage stage embryos which had been frozen by slow methods. The results in this rather small series reported no adverse outcomes, but need to be confirmed in a much larger number of children (p. 1699).

A fertility status awareness tool (FertiSTAT) was developed by identifying independent risk factors associated with female fertility impairment. The validation was done on more than 1000 women and resulted in a self-administered multifactorial tool which can enable women to get a personalized fertility guidance based on their own lifestyle and reproductive profile (p. 1722).

Maternal death related to IVF is, of course, the most serious complication which can occur. Maternal deaths related to IVF or occurring during IVF pregnancy were recorded in the Netherlands for the period 1984–2008. A letter was send to the clinicians of the 17 IVF Centers and data were also collected from the Maternal Mortality Committee. There were 31 maternal deaths: 6 related to IVF, 17 occurring during IVF pregnancy and 8 deaths which could not be related to the two previous conditions. Although maternal death related to IVF is rare, this report from The Netherlands indicate that worldwide underreporting of fatal cases is probably occurring. The authors rightly make a plea that all serious complications need to be reported (p. 1782).