

## Convenience and individualisation in ART

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Ovarian stimulation has proven to be an important key for the success of assisted procreation (insemination, in-vitro fertilisation, intra-cytoplasmic sperm injection). As a general rule, it can be considered that it increases the success rate by the proportion of mature follicles developing in a given cycle. But there are numerous limits to this rule, the main one being the risk of overstimulation and multiple pregnancies. Clinical research is presently more orientated towards the attainment of quality rather than quantity. The ovarian response can vary widely from one individual woman to one another. Physiological as well as pathological factors can affect the ovarian response. They need to be taken into account clinically, and via various means such as imaging and hormonal evaluations. The analysis of each individual ovarian response obtained with a given stimulation regimen during a previous cycle gives the final indication to what should be modified in order to better approach the goal: obtain a homogenous cohort of a reasonable number of quality oocytes. Controlled ovarian stimulation protocols include in a vast majority of cases the use of recombinant FSH and GnRH agonists in the so-called long treatment regimen. These protocols have been defined on a fixed basis. Modifications are usually introduced later during the cycle, at the time of ovarian monitoring, depending on the type of ovarian response obtained. These late alterations can only bend partially the final result. This is why, based on this experience and on new knowledge on the individual ovarian threshold and on follicular maturation, ovarian stimulation regimens are more and more adapted to the individual requirement. Every parameter can be modified: type of agonist and duration of the desensibilisation period, starting and daily dose of gonadotrophins.

The same individualisation of ovarian stimulation regimens will apply with the wider use of GnRH antagonists, although it is not clear yet if individual parameters will influence the choice between the use of an agonist or an antagonist protocol. GnRH antagonist treatments are more convenient for patients because the treatment duration is significantly shorter. Moreover they are also safer as antagonist protocols carry a lower risk for developing OHSS.

A further step up in convenience and individualization is achieved with the launch of the Puregon Pen. The Puregon Pen is an innovative self injection device with all the benefits of Puregon and with further improved flexibility, individualized treatment and convenience. In this device cartridges with either 300 IU (525 µl) or 600 IU (885 µl) of Puregon can be placed for multiple use. The Pen can be preset to deliver doses from 50-450 IU and allows dose increments in steps of 25 IU in a relatively small injection volume of 30 µl, making it the most convenient and flexible gonadotrophin dosing device currently available.

The individualized approach to treatment will not only reduce the overall drug exposure, but also minimize cancellation rates while optimizing pregnancy chances. Moreover, patient convenience and safety will improve, the latter by reducing the risk for OHSS and the risk for multiple gestations.