

### Introduction

Previously, Poor Ovarian Response or POR is known as a reduction in follicular response, resulting in a reduced number of retrieved oocytes after ovarian stimulation. At least two from these three Bologna criteria needed to define the diagnosis. ( 1. advance maternal age or any other risk factor for POR, 2. a previous POR ( <3 oocytes with a convention stimulation protocol) and 3. an abnormal ovarian reserve test, diagnosed with AFC count and AMH count. ) Currently, there is a new term called POSEIDON stratification, introducing a more detailed stratification of POR, which widens the criteria to diagnose POR patients. However, there is still a few evidence available of POSEIDON stratifications regarding the ART outcome. So we did this study to validate the POSEIDON stratification outcome in our center.

### Methods

A retrospective cohort study was done in Yasmin IVF Clinic, dr. Cipto mangunkusumo General Hospital, Jakarta. Data was taken from medical records between 2013-2018. The clinical and laboratory records of 504 poor responder women who were undergoing IVF recorded. All patients were categorized into four groups according to POSEIDON criteria. Further, we subcategorized the patients into two groups, group 1 and group 2, as “adequate ovarian reserve” and groups 3 and 4 as “poor ovarian reserve.” All groups, including subgroups characteristics, were recorded, and the primary outcome measured in this study was the clinical pregnancy rate in all groups. Data were analyzed using SPSS statistics. Then the chi-square test was done.

### Result

The clinical pregnancy rate in “adequate ovarian reserve” groups significantly higher compared to “poor ovarian reserve” groups ( $p < 0.048$ ). The clinical pregnancy rate in each Poseidon groups was 26,3% (group 2), 20,8% (group 1), 19,5% (group 3), and 18,1% (group 4).

### Conclusion

In “adequate ovarian reserve,” groups show a higher outcome than “poor ovarian reserve.” Further studies regarding POSEIDON stratifications needed to explore the most optimal strategy for poor responder patients.