Ocrelizumab Pregnancy Registry to Assess Maternal, Fetal and Infant Outcomes in Women With Multiple Sclerosis Exposed to Ocrelizumab During Pregnancy

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BACKGROUND
- Ocrelizumab (OCR) is a recombinant, humanized, monoclonal immunoglobulin G1 antibody that selectively targets CD20+ B cells
- Immunoglobulins such as OCR do not cross the placenta during the first trimester of pregnancy, but transfer of OCR can occur thereafter
- The safety profile of OCR has been investigated in multiple clinical trials and although the use of effective contraception was mandatory, 25 pregnancies have been reported in women with multiple sclerosis (MS) receiving OCR during these trials up to the end of January 2017. In 14 of these 25 pregnancies, the fetuses were considered to have been exposed to OCR
- The small number of pregnancies and pregnancy outcomes that have been reported from clinical trials means the safety profile of OCR in pregnancy and fetal outcomes has yet to be established
- This study has been designed as part of the post-marketing activities to provide information that will help patients receiving OCR and clinicians when making decisions related to pregnancy

METHODS
- This observational study will follow 85 pregnant women with MS who are planning to become pregnant or may have been exposed to OCR during the 6 months prior to their LMP or at any time during pregnancy (Figure 1).
- Women with MS with no prior OCR exposure before or during pregnancy were recruited to assess the frequency of selected adverse pregnancy outcomes (e.g. spontaneous

OBJECTIVE
- To assess maternal, fetal and infant outcomes in women with MS exposed to OCR during the 6 months prior to their last menstrual period (LMP) or at any time during pregnancy.

Study Objectives
- To characterize pregnancy and infant outcomes of women with MS exposed to OCR during the 6 months prior to their LMP or at any time during pregnancy, including:
  - The frequency of selected adverse pregnancy outcomes (e.g. spontaneous abortions, stillbirths, elective or therapeutic terminations, and preterm births)
  - The frequency of selected adverse fetal/neonatal/infant outcomes (e.g. major and minor congenital malformations, small for gestational age, postnatal growth and development, adverse effects on immune system development, outcomes related to immune suppression) at birth and through at least the first year of life of infant

Data Sources
- Data will be obtained through questionnaires administered to patients and their healthcare professionals (HCPS: neurologist, obstetrician and pediatrician)
- This study will compare the frequency of each safety event of interest between OCR-exposed pregnant women with MS and two comparison cohorts:
  - Women with MS with no prior OCR exposure before or during pregnancy
- The planned start date is mid-2018 and key study milestones are shown in Figure 3. Interim results will be communicated when sufficient patients have been accrued to analyse data.

Study Design
- The registry will collect primary data from pregnant women with MS from the United States, Germany and other countries who have been exposed to OCR during the 6 months prior to their LMP or at any time during pregnancy (Figure 1).
- Data will be collected from patients and their HCPS (neurologist, obstetrician) during pregnancy and through at least 1 year after birth (Infant’s pediatrics).
- The design of the pregnancy exposure registry is consistent with relevant guidelines and recommendations.

DISCLAIMERS
- The Ocrelizumab Pregnancy Registry is a multicenter prospective, observational study that will provide insights on the safety profile of ocrelizumab during pregnancy in a real-world setting and complement existing data through a randomized study (not described). The study (http://www.clinicaltrials.gov) is open to all eligible patients.

RESULTS
- The planned start date is mid-2018 and key study milestones are shown in Figure 3. The total duration of participation is 21 months, and the study will last approximately 10 years.
- Interim results will be communicated when sufficient patients have been accrued to analyze data and final results will be communicated to the MS community.

CONCLUSIONS
- The Ocrelizumab Pregnancy Registry is a multicenter prospective, observational study that will provide insights on the safety profile of ocrelizumab during pregnancy in a real-world setting and complement existing data through a randomized study (not described). The study (http://www.clinicaltrials.gov) is open to all eligible patients.

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