

ABSTRACT NUMBER: 1303

# Polycystic Ovarian Syndrome in Rheumatic Disease

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## SESSION INFORMATION

**Date:** Monday, November 6, 2017

**Session Type:** ACR Poster Session B

**Title:** Reproductive Issues in Rheumatic Disorders Poster

**Session Time:** 9:00AM-11:00AM

**Background/Purpose:** Polycystic ovarian syndrome (PCOS) is a common entity in the general population associated with polycystic ovaries, oligomenorrhea, difficulty conceiving, hormone abnormalities, metabolic comorbidities, and hirsutism. Prevalence ranges from 3-10%. Fertility issues, menstrual cycle irregularities, and metabolic conditions are common in those with rheumatic disease as well. The prevalence of PCOS in those with rheumatic disease is unknown.

**Methods:** Utilizing a secure cloud-based platform, Explorys, we conducted a retrospective cross-sectional study of females 10-50 years of age. The diagnosis of PCOS was determined if the subject had polycystic ovaries and 1/10 known findings associated with PCOS (Table 1). Our inclusion criteria was limited by the existence of Systematized Nomenclature for Medicine-Clinical Term (SNOMED-CT), as the Explorys database is ontology based. A SNOMED-CT does not exist for PCOS. Diseases of interest included: systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), dermatomyositis (DM), psoriasis (PsO), ankylosing spondylitis (AS), psoriatic arthritis (PsA), and juvenile idiopathic arthritis (JIA). Disease-specific searches excluded all other rheumatic diseases of interest in this study and endocrinopathies. Table 2 summarizes the findings of each patient population. Chi-squared testing was performed to compare prevalence of PCOS between rheumatic diseases.

**Results:** In our analysis, there was significant prevalence of PCOS between SLE and RA, PsO, PsA, and AS as well as RA and PsO and PsA with p-values <0.01. There was also significance between JIA and PsA, PsO, and AS. In our Explorys population, PCOS prevalence was found to be low, however recognized underreporting of PCOS and known lack of medical care for this diagnosis may account for this. In our data set, our disease specific prevalence was similar to reported values, validating our cohort.

**Conclusion:** PCOS prevalence in rheumatic diseases nears that of the general population. There is a significantly increased prevalence in those with PsA, PsO, and AS. It should be considered as a

diagnosis in those who have oligomenorrhea, infertility, or signs of hyperandrogenization.

|            | Explorays | SLE   | RA    | DM    | PsO   | PsA   | AS    | JIA   |
|------------|-----------|-------|-------|-------|-------|-------|-------|-------|
| PCOS       | 126330    | 1120  | 1540  | 50    | 1340  | 290   | 150   | 160   |
| Total      | 14209420  | 34300 | 39480 | 1290  | 30740 | 6020  | 3150  | 4570  |
| Prevalence | 0.009     | 0.033 | 0.039 | 0.039 | 0.044 | 0.048 | 0.048 | 0.035 |

|                           |   |
|---------------------------|---|
| <b>Polycystic Ovaries</b> | Menstruation Absence                          |
|                           | Hirsutism                                     |
|                           | Disorder of ovary, endocrine                  |
|                           | Infertility associated with anovulation       |
|                           | Hyperandrogenization                          |
| <b>AND</b>                | Abnormal menstrual cycle                      |
| One of the following      | Abnormal serum Testosterone Level             |
|                           | Abnormal serum Anti-Müllerian Hormone         |
|                           | Abnormal serum Dehydroepiandrosterone Sulfate |

**Disclosure:** C. Edens, None; M. Antonelli, None.

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