Poster# **4500**

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Identification and Description of Real-World Data Sources for Giant Cell Arteritis (GCA) and Polymyalgia Rheumatica (PMR)

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KEY FINDINGS & CONCLUSIONS

- There is a lack of disease-specific sources for both GCA and PMR, with only 9 and 1 registries identified, respectively.
- This underscores the need for future collaborations to collect robust RWD to better understand GCA and PMR.
- Limitations: Description of the identified RWD was based on information publicly available. Data owners were not contacted to confirm the accuracy of this evidence.

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INTRODUCTION

- GCA is a chronic, idiopathic vasculitis of large and medium arteries, typically in individuals aged >50 years, resulting in chronic inflammation, which leads to vascular remodeling and occlusion.[1,2,3] GCA can lead to serious complications such as permanent visual loss and stroke, if left untreated.
- PMR is an inflammatory rheumatic disorder characterized by muscle pain and stiffness, especially in the neck, shoulder, and pelvic girdle[4]
- 16% - 21% of PMR patients[5] can develop GCA while 50% of GCA patients[6] report PMR as a comorbidity

OBJECTIVES

- Given the growing interest for real-world data (RWD), we aimed to identify disease-specific RWD for Giant Cell Arteritis (GCA) and Polymyalgia Rheumatica (PMR) and to describe their key characteristics (variables collected, geographical scope, design etc.)

METHODS

Database search	EMBASE / Medline (2019 - May 2024; past 5 years) based on defined search terms and PICO framework
Screening	• Title / abstract screening • Full text screening (for articles included in 1)
Linking and Finalization	• Link publications based on unique data sources • Finalize unique list of data sources
Data mapping	• Identify and map different variables using data abstraction tool

Figure 1. PICOS Criteria

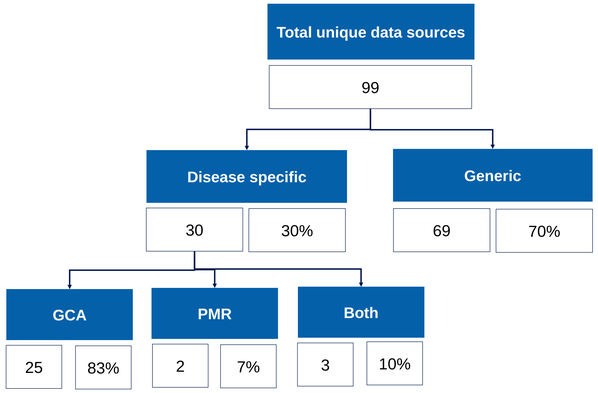
P	• Adult patients with GCA and PMR
I/C	• No restriction based on intervention
O	• Epidemiology & characteristics of patient population, clinical variables, humanistic burden, PROs, economic data, treatment pattern
S	• Real world study, electronic health records, observational study, registry, database, administrative / claims database, survey

P: Population, I: Intervention, C: Comparator, O: Outcomes, S: Study Design

RESULTS

- A total of 2242 publications were retrieved from the literature search and 99 unique data sources were identified.
- Detailed information for up to 44 variables was extracted for each unique data source, when provided in the publications.
- Amongst all the unique data sources, only one-third of them were disease-specific and most (>80%) were focused on GCA.

Figure 1. GCA and PMR data sources classification



- Across all sources (n=99), the most widely reported parameters were age (95%), gender (93%), labs including C-reactive protein (62%) and erythrocyte sedimentation rate (48%), temporal artery biopsy (48%), glucocorticoids (60%), visual complications (46%), certain comorbidities like diabetes mellitus (44%).
- The least reported parameters include genetics (2%), upper limb claudication (3%), leflunomide (4%), emergency visits and costs (3%), and PROs (1-3%).
- Detailed completion rate of variables across the different categories is given in Figure 2.

GCA: Giant Cell Arteritis, PMR: Polymyalgia Rheumatica, PRO: Patient Reported Outcomes

Figure 2. Completion rate of selected variables

≥1% to 10%	Genetics, Headache, Jaw claudication, Upper limb claudication, Aortitis, Aneurysm, Leflunomide, GC toxicity, Emergency visit, Costs, PROs
11% to 20%	Symptom duration, Ethnicity, Cranial GCA, LV-GCA, Hypertension, CT angiography, Lower limb claudication, Transient ischemic attack, Death
21% to 30%	Smoking, Dyslipidemia, Ultrasound, FDG-PET CT, MRI angiography, Abnormal TA, Stroke, Hemoglobin, Platelets, Methotrexate, Biologics, Other treatments, Relapse
31% to 40%	Previous CVD, Scalp tenderness, Fever
41% to 50%	Diabetes Mellitus, TAB positive, PMR, Visual complications, ESR

GC: Glucocorticoid, PRO: Patient Reported Outcomes, LV-GCA: Large Vessel Giant Cell Arteritis, CT: Computed Tomography, FDG-PET: Fluorodeoxyglucose Positron Emission Tomography, MRI: Magnetic Resonance Imaging, TA: Temporal artery, CVD: Cardiovascular Disease, TAB: Temporal Artery Biopsy, ESR: Erythrocyte Sedimentation Rate

- The top three variables which were the most reported across each of the categories are indicated in Figure 3.

Figure 3. Top 3 variables across the different categories

Demographics and diagnosis	• Age (95%) • Gender (93%) • Temporal artery biopsy (48%)
Risk factors	• Diabetes Mellitus (44%) • Hypertension (40%) • Previous CVD (31%)
Clinical outcomes	• Occurrence of PMR (48%) • Visual Complications (46%) • Scalp Tenderness (34%)
HRCU	• Hospitalizations (10%) • Costs (3%) • Visits (3%)
Treatments	• Glucocorticoids (60%) • Biologics (25%) • Other drug classes (25%)

CVD: Cardiovascular disease, PMR: Polymyalgia Rheumatica, HRCU: Healthcare Resource Utilization

- Amongst the 30 disease specific data sources, there were 10 registries, of this, 9 were GCA related and 1 was PMR.
- Majority of these disease specific data sources were multi-center (69%).
- In terms of geographic coverage, Europe (83%) was largely covered, followed by North America (13%) and Japan (3%).

Table 1. Disease specific registries

Data Source	Population	Geography	N	Years covered	Center
Diagnostic and Classification Criteria in Vasculitis (DCVAS)	GCA	International	6991	2011-17	Multicenter
International Collaboration - GCA	GCA	Europe	778	2015	Multicenter
HAS-GCA Study	GCA	Europe	229	2019-22	Multicenter
Vasculitis Clinical Research Consortium (VCRC) Study	GCA	North America	426	2006-19	Multicenter
ARTEMIS study	GCA	France	306	2018 (Aug-Nov)	Multicenter
The Joint Vasculitis Registry in German-speaking countries (GeVas)	GCA	Germany, Austria, Switzerland	517	2019-ongoing	Multicenter
Real-Life Treatment and Safety - GCA Cohort Study (REATS)	GCA	Germany	395	Unknown	Multicenter
Spanish Giant Cell Arteritis Registry (ARTESER)	GCA	Spain	1636	2013-19	Multicenter
Rheumatology Informatics System for Effectiveness (RISE)	PMR	USA	240,000	2016-22	Multicenter

HAS-GCA: Halo and SGCAPS Score for Giant Cell Arteritis

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Disclosures

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