**Alport syndrome**, a rare genetic kidney disease, shows notable gender and regional differences in patient characteristics. Multi-database studies using OMOP Common Data Model are an excellent opportunity to gain insights into rare diseases.

### Baseline characterization and treatment pathways of patients with Alport Syndrome across geographies: Exploring a rare disease in a multi-database retrospective cohort study

#### Background:
Alport Syndrome (AS) is a rare genetic kidney disease that usually manifests in early childhood. Mutations in the COL4A3, COL4A4, and COL4A5 genes lead to defective collagen production. Consequently, patients may present with hematuria, proteinuria, or progressive loss of kidney function leading to kidney failure in addition to ocular abnormalities and hearing loss.

#### Results:
Overall, 1819 AS patients were identified from 6 databases across 3 countries. In the US, patients were diagnosed with AS around the age of 20. Male patients were 7-10 years younger than females at index date. In the UK, patients were diagnosed with AS in their early teens, in Japan around the age of 24. Common comorbidities at baseline can be found in figure 1.

#### Methods:
- A longitudinal retrospective cohort study
- 6 OMOP databases from 3 countries
- Study start date 01-JAN-2012

#### Conclusions:
This study demonstrates that the use of data sources standardized to the OMOP CDM and using OHDSI tools provides an excellent opportunity to gain insights into rare diseases across multiple geographies and healthcare settings in a standardized approach where contemporary real-world evidence is scarce. It provides new insights into the demographics, clinical characteristics, and treatment utilization of patients with AS. These data may be useful to gain knowledge about the disease, provide better support to clinicians and healthcare providers and most importantly, improve patient’s quality of life.