

Introduction

Epilepsy is a common chronic neurological disorder of the brain, characterised by the recurrence of unprovoked seizures.¹ Anti-seizure medications (ASMs) are the most common treatment for epilepsy, and although most people achieve seizure remission with ASMs, some will continue to have seizures and can later become drug resistant.² Therefore, to provide valuable information on treatment practices and features of individuals with Drug Resistant Epilepsy (DRE) at primary and specialist care levels, we designed a Real-World Evidence, retrospective analysis on cohorts of people with Focal-onset Drug Resistant Epilepsy (F-DRE) gathered from Electronic Medical Records (EMR) databases in six European countries.

Objectives

To investigate the burden of illness, demographics, clinical characteristics, ASM treatment patterns, and Healthcare Resource Utilization (HCRU) amongst people with F-DRE in Europe.

Methods

A cohort of F-DRE individuals across UK, Belgium, Germany, France, Spain, and Italy was identified from July 2015 to April 2022. Resistance to treatment was defined based on the failure of two or more tolerated ASMs. Individuals with at least one specific focal-epilepsy (FE) diagnosis (Index date 1), were selected from primary/specialist care databases. The third ASM treatment initiation (Index date 2) was the proxy for treatment resistance. People with a diagnosis of generalised epilepsy, aged <18 or with less than 180 days of follow-up, were excluded. The study population was ASM treatment naïve at Index date 1. The study design is represented in Figure 1.

Results

64,439 individuals presented at least one specific FE diagnosis, and after applying the inclusion and exclusion criteria, a total of 1,075 individuals with F-DRE were included in the cohort (Figure 2). In the overall population, median age at Index date 2 was 50 years and females accounted for 54.1% of the population. Time to first ASM failure from diagnosis ranged from 5.8 months in France, to 12.5 months in Spain, while time to second ASM failure ranged from 15.3 months in France to 33.1 in the UK. Median time from the second ASM regimen initiation until failure had a shorter duration in Belgium, Spain, and the UK compared with the median time from the first ASM regimen initiation until failure, whereas the duration of the second ASM regimen was longer than the first ASM regimen in France and of a similar length in Italy and Germany.

Regarding comorbidities, psychiatric disorders, such as depression and anxiety, were the most common ones across all countries, except for Spain, where cardiovascular and metabolic disorders had a similar prevalence (Figure 3). Hepatic and renal function tests were the most commonly recorded laboratory investigations, performed mainly after epilepsy diagnosis in Belgium and Germany and after F-DRE in Italy, Spain, and the UK.

Conclusions

This retrospective real-world study identified over 1,000 people with F-DRE across six European countries. This study highlighted the presence of high heterogeneity across countries in terms of results on the investigated outcomes. Moreover, psychiatric disorders were the most prevalent comorbidity in all countries, while hepatic and renal function tests were the most common recorded blood tests.

Figure 1. Study design

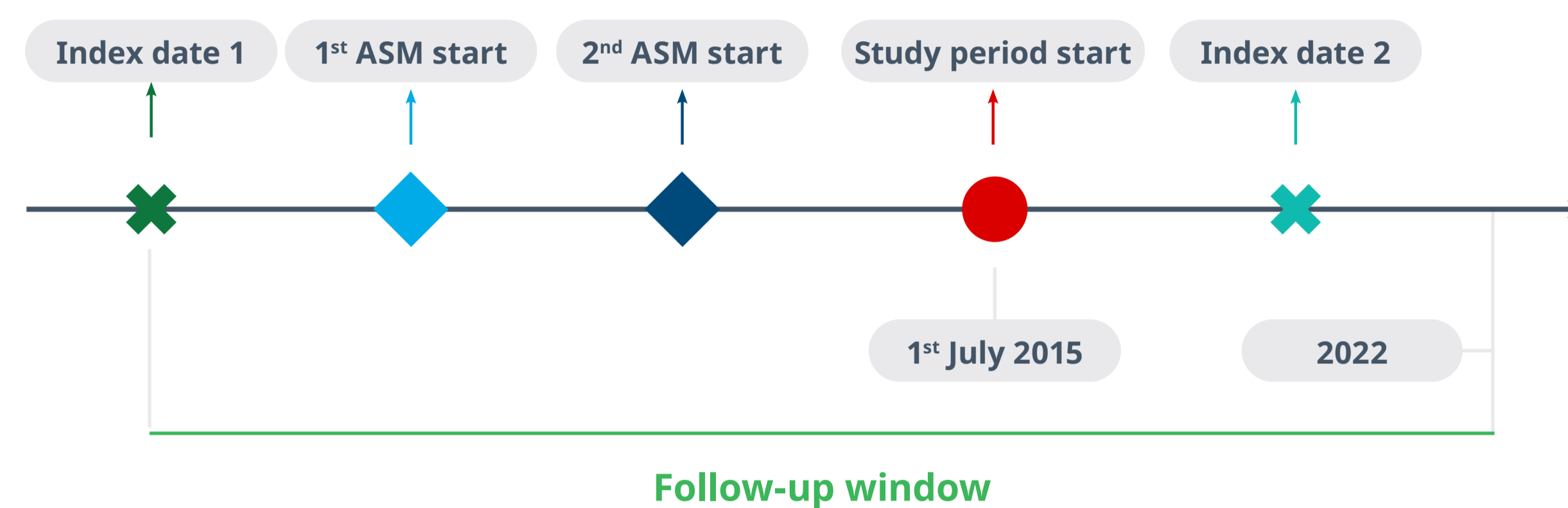


Figure 2. Flow-chart for the identification of individuals with F-DRE

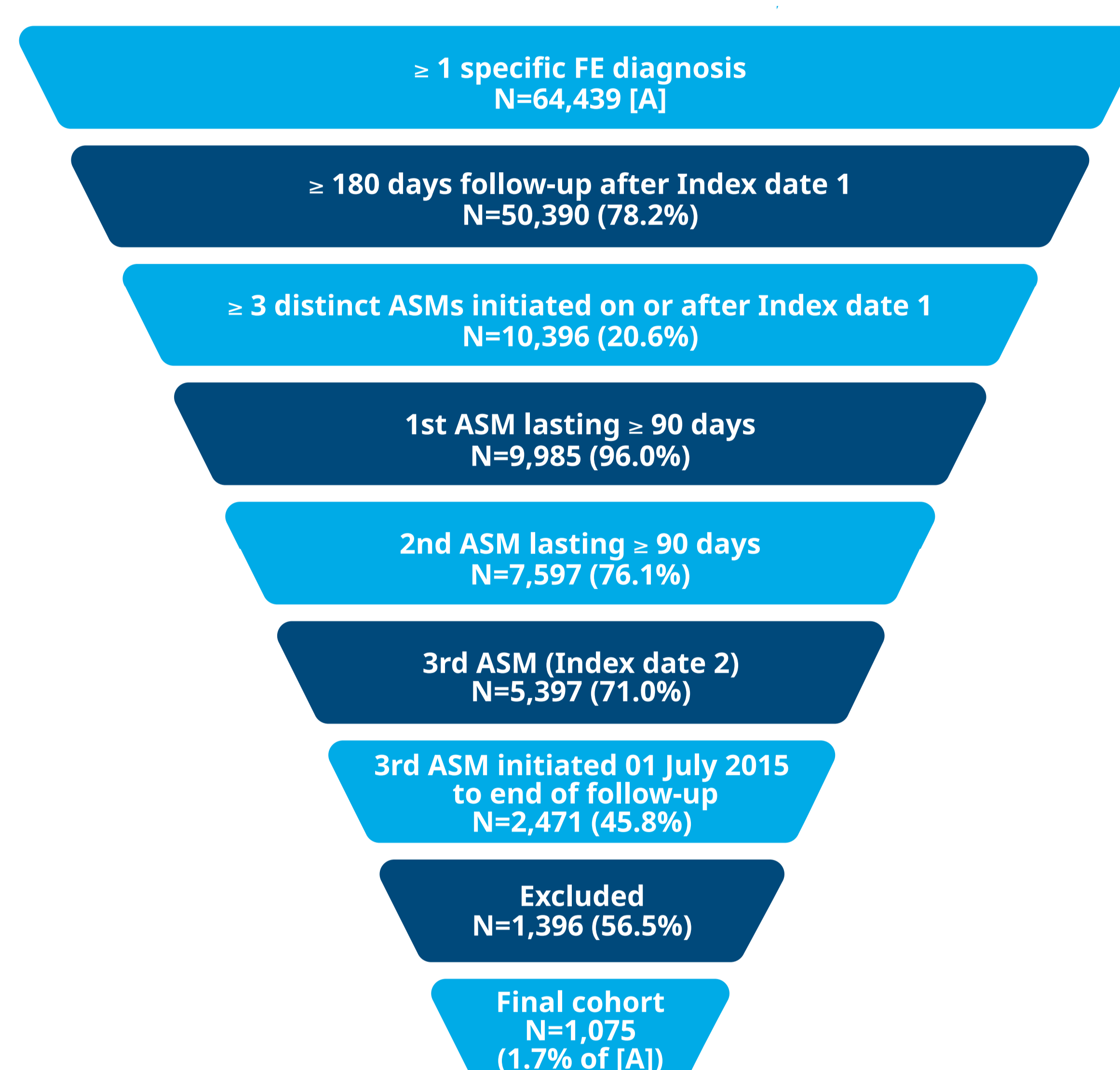
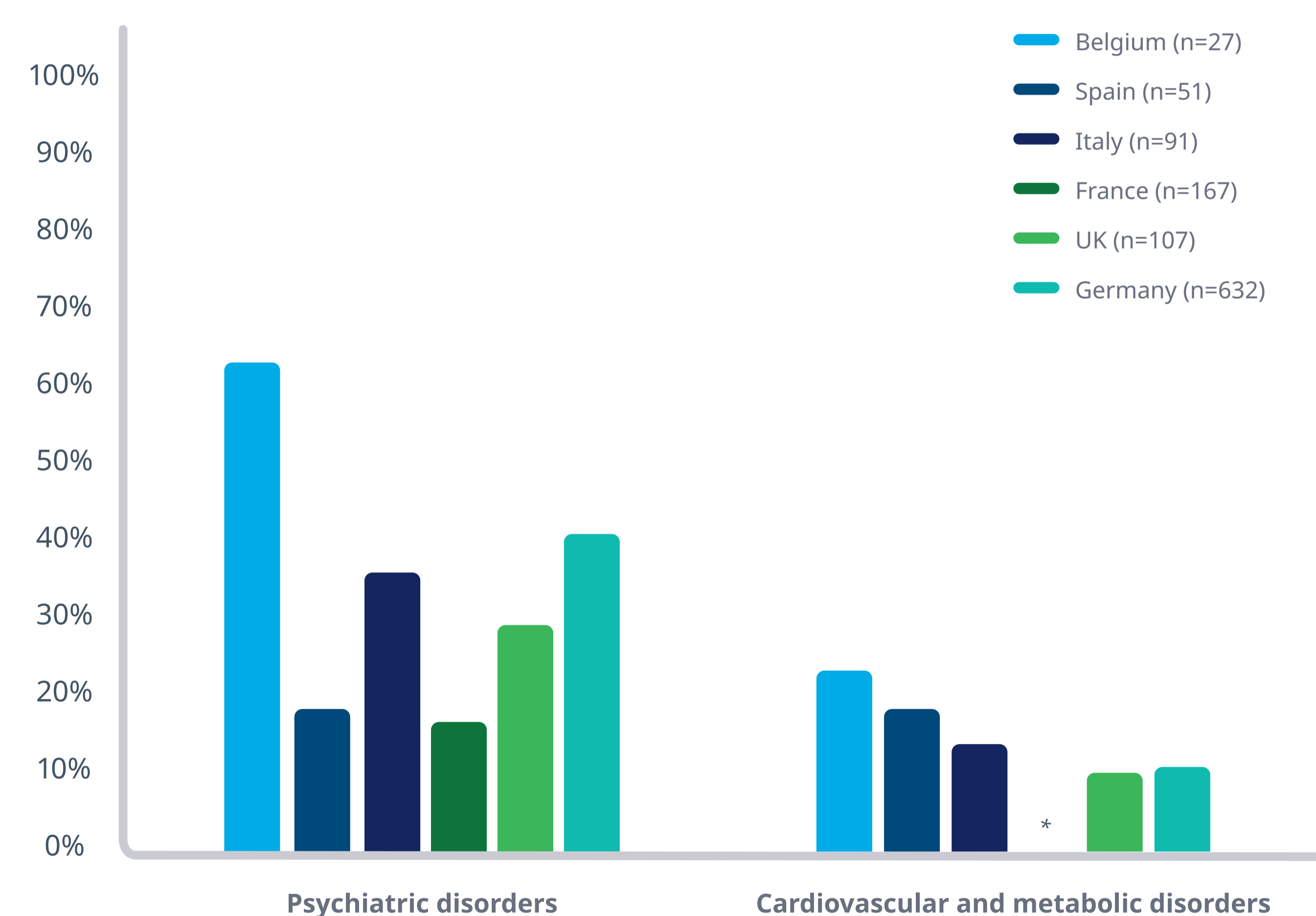


Figure 3. Presence of comorbidities in individuals with F-DRE (all countries)



* For France, suppressed result due to small number of individuals (≤10)

REFERENCES

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