

sanofi



R&D Day
Epidemiology

New York, NY



December 7, 2023

Epidemiology

R&D Day 2023

01 • Immunology & Inflammation

02 • Neuro-inflammation

03 • Rare Blood Diseases

04 • Oncology



Epidemiology

R&D Day 2023

01 • Immunology & Inflammation

- Respiratory
- Dermatology
- Gastrointestinal
- Other diseases

02 • Neuro-inflammation

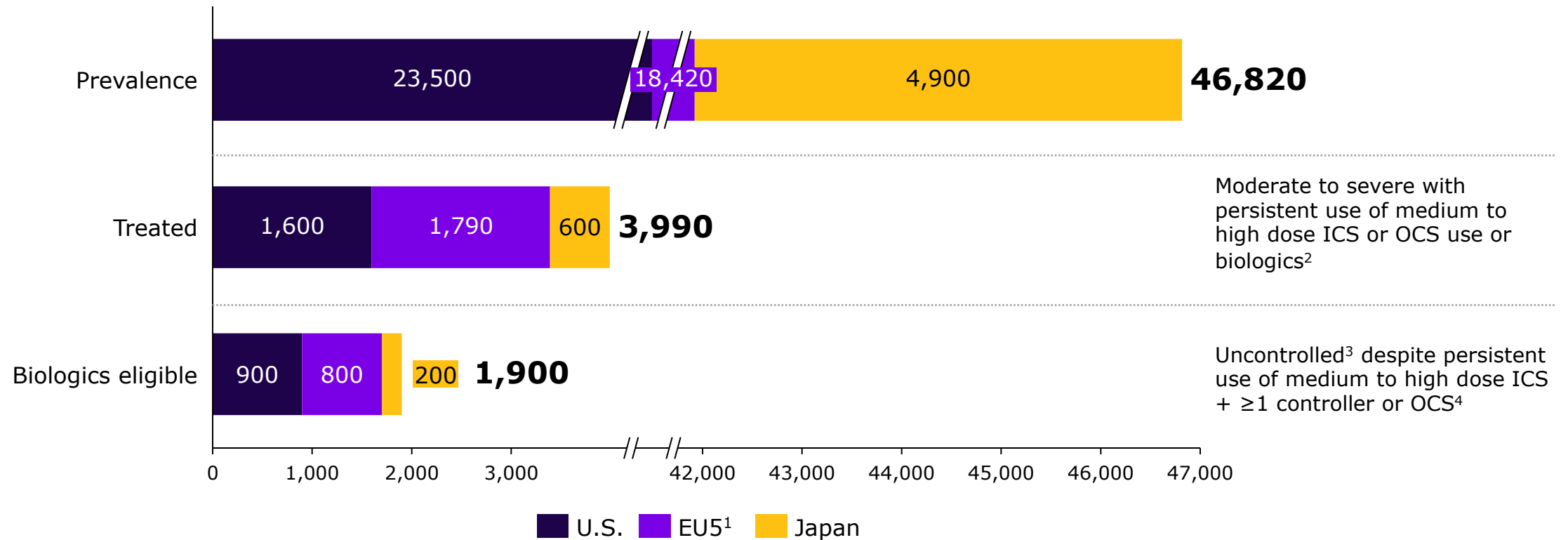
03 • Rare Blood Diseases

04 • Oncology



Asthma 12+yo

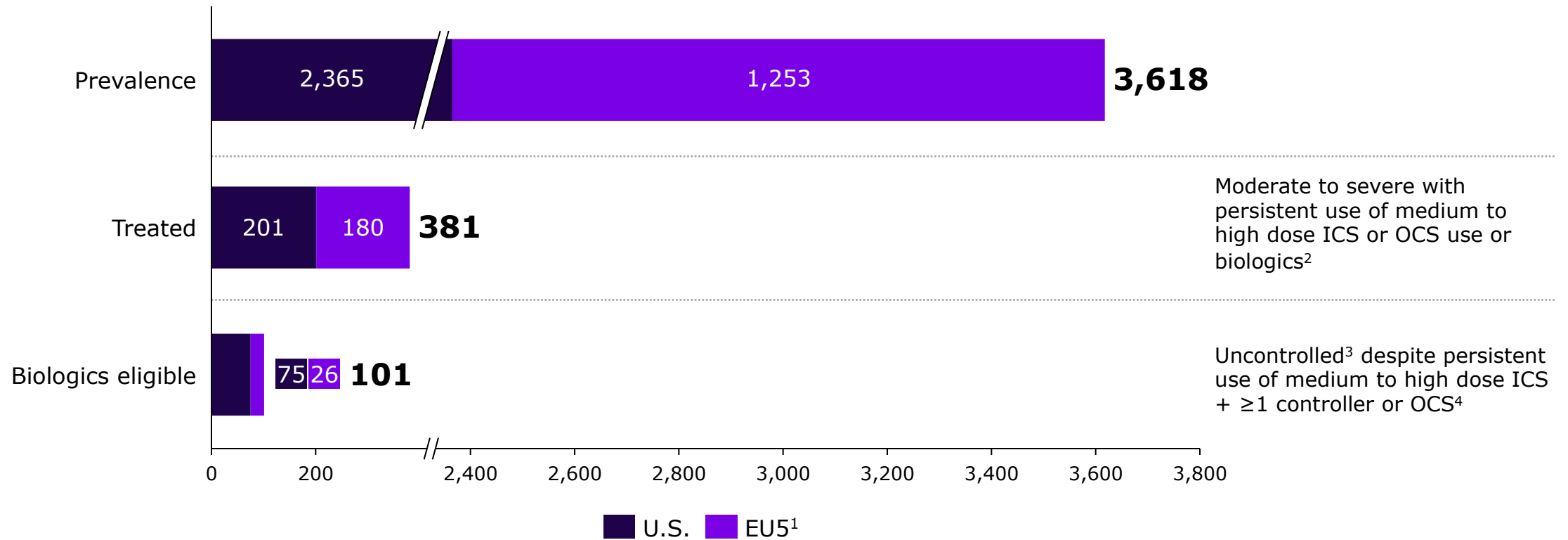
Number of patients (thousands)



Source in Appendix table; ICS: Inhaled Corticosteroids; OCS: Oral Corticosteroids; 1. Germany, France, Italy, Spain, and United Kingdom; 2. For EU, severe with persistent use of ICS or OCS; 3. Uncontrolled: 1 or + exacerbation per year; 4. For EU, severe uncontrolled or OCS dependent.

Asthma 6-11yo

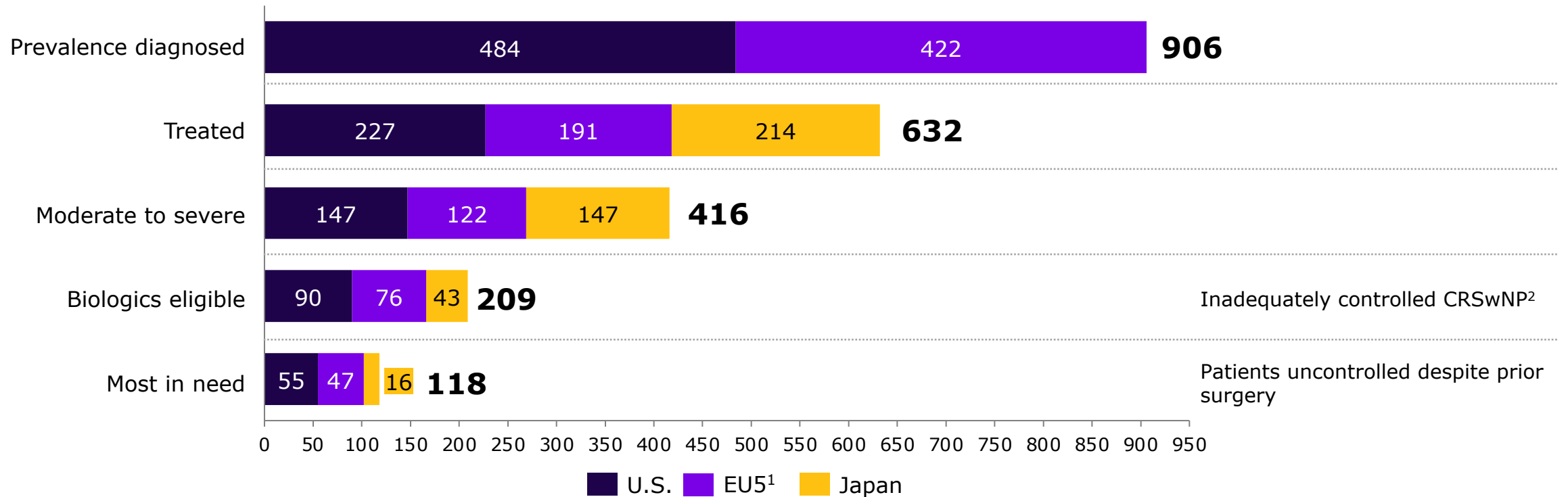
Number of patients (thousands)



Source in Appendix table; ICS: Inhaled Corticosteroids; OCS: Oral Corticosteroids 1. Germany, France, Italy, Spain, and United Kingdom; 2. For EU, severe with persistent use of ICS or OCS; 3. Uncontrolled: 1 or + exacerbation per year; 4. For EU, severe uncontrolled or OCS dependent.

Chronic Rhinosinusitis with Nasal Polyposis (CRSwNP)

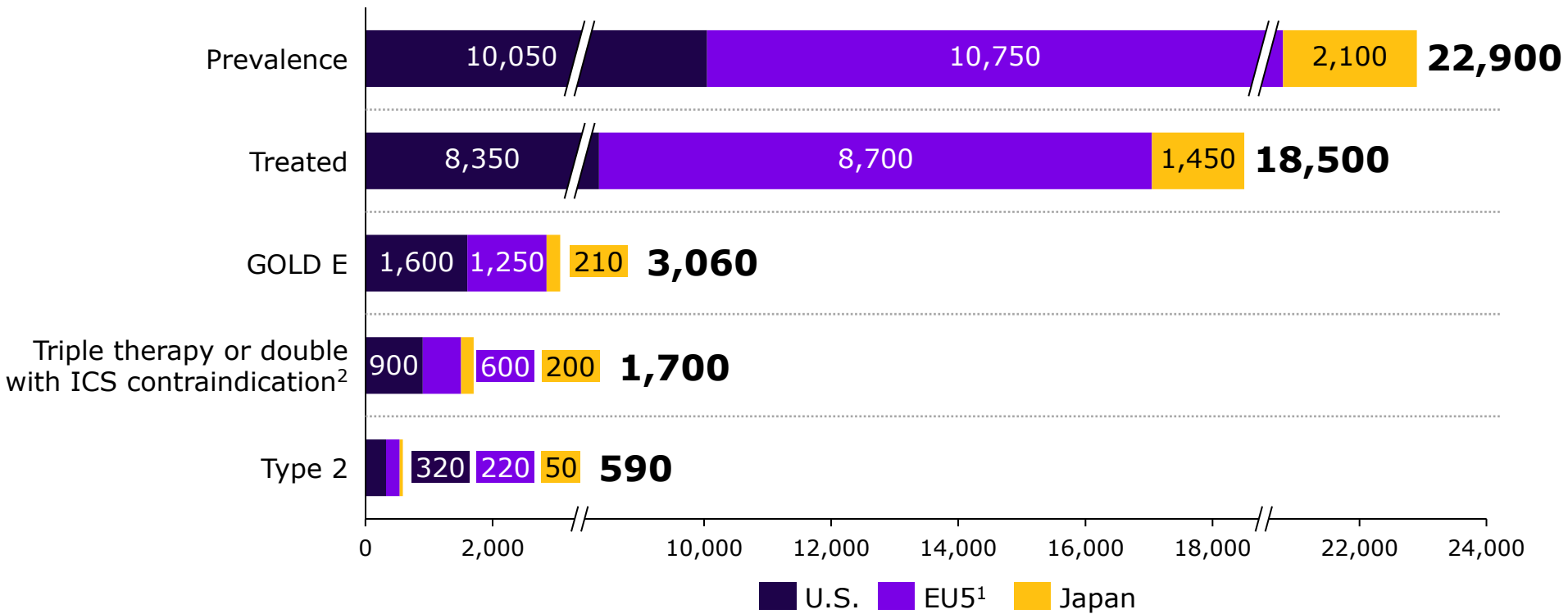
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom; 2. For EU, patients with severe CRSwNP inadequately controlled on systemic corticosteroids and / or surgery

Chronic Obstructive Pulmonary Disease (COPD)

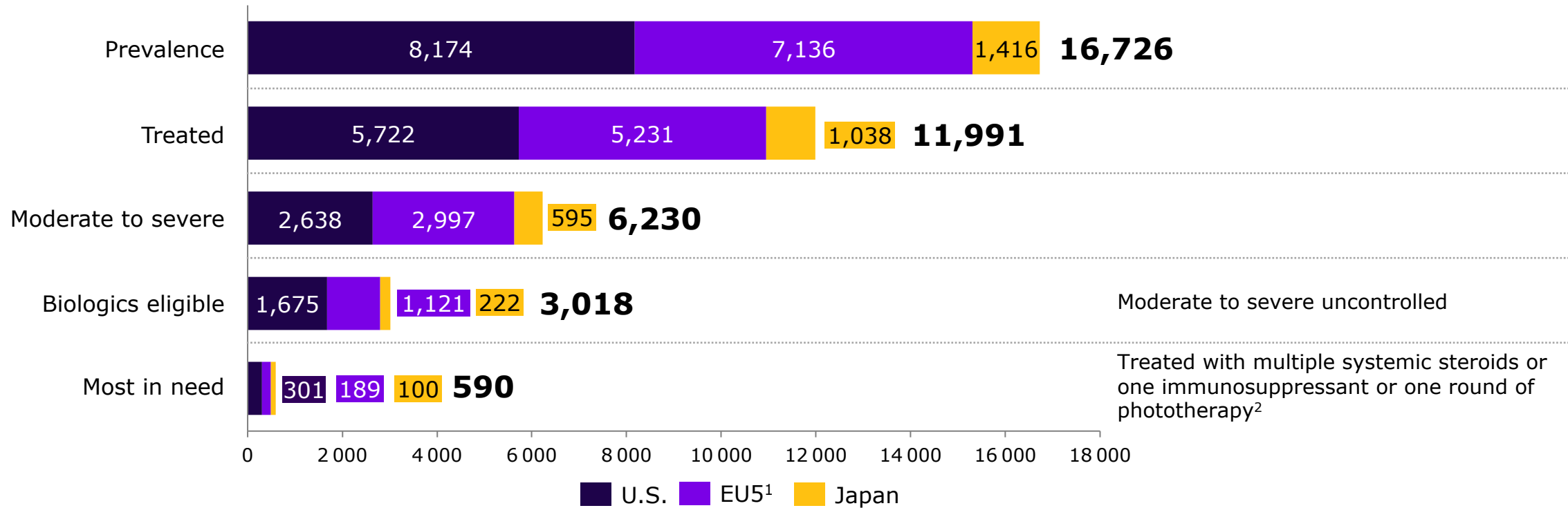
Number of patients (thousands)



Source in Appendix table; GOLD criteria: Global Initiative for Chronic Obstructive Lung Disease - Group E defined as high risk (≥2 exacerbations / year, or one+ requiring hospitalization); 1. Germany, France, Italy, Spain, and United Kingdom; 2. Double therapy: LAMA/LABA.

Atopic Dermatitis (AD) Adult 18+yo

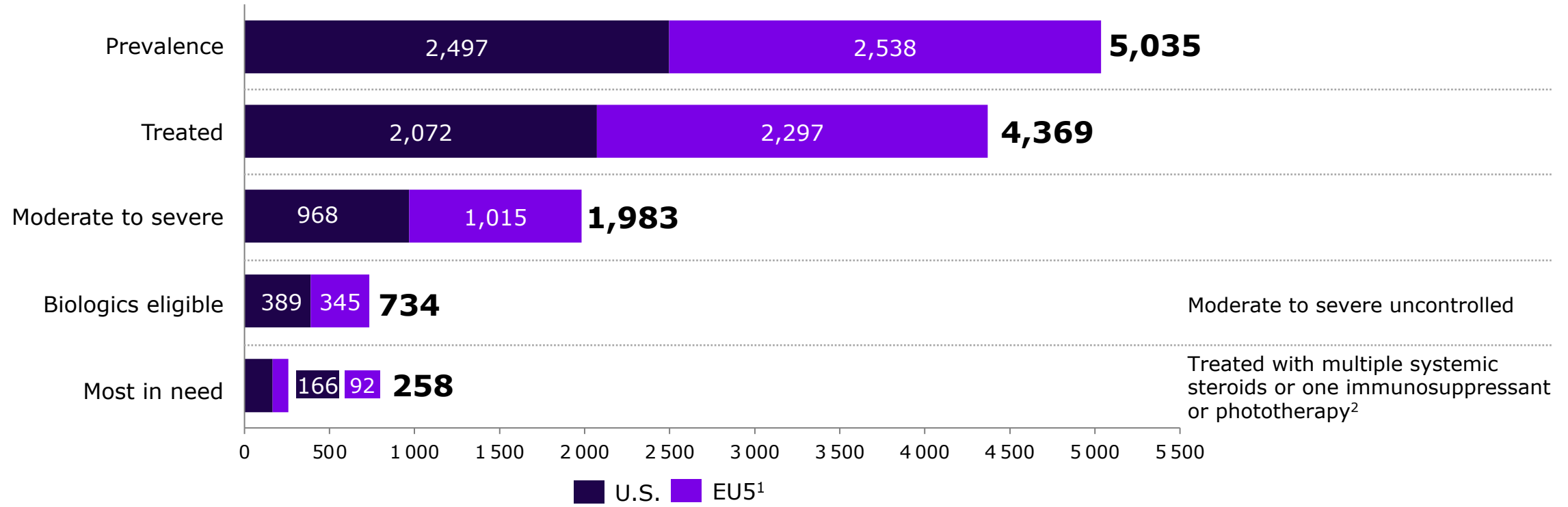
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom; 2. For EU, patients who have inadequate response or intolerant to immunosuppressants.

Atopic Dermatitis (AD) Adolescents 12-17yo

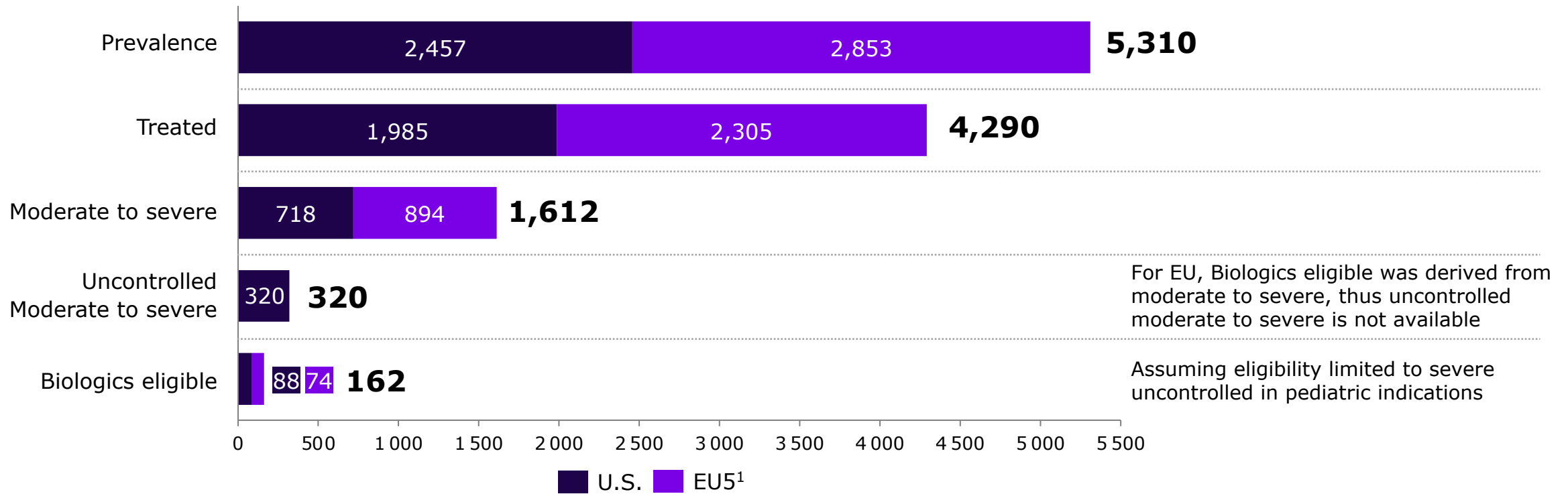
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom; 2. For EU, patients who have inadequate response or intolerant to immunosuppressants.

Atopic Dermatitis (AD) Child 6-11yo

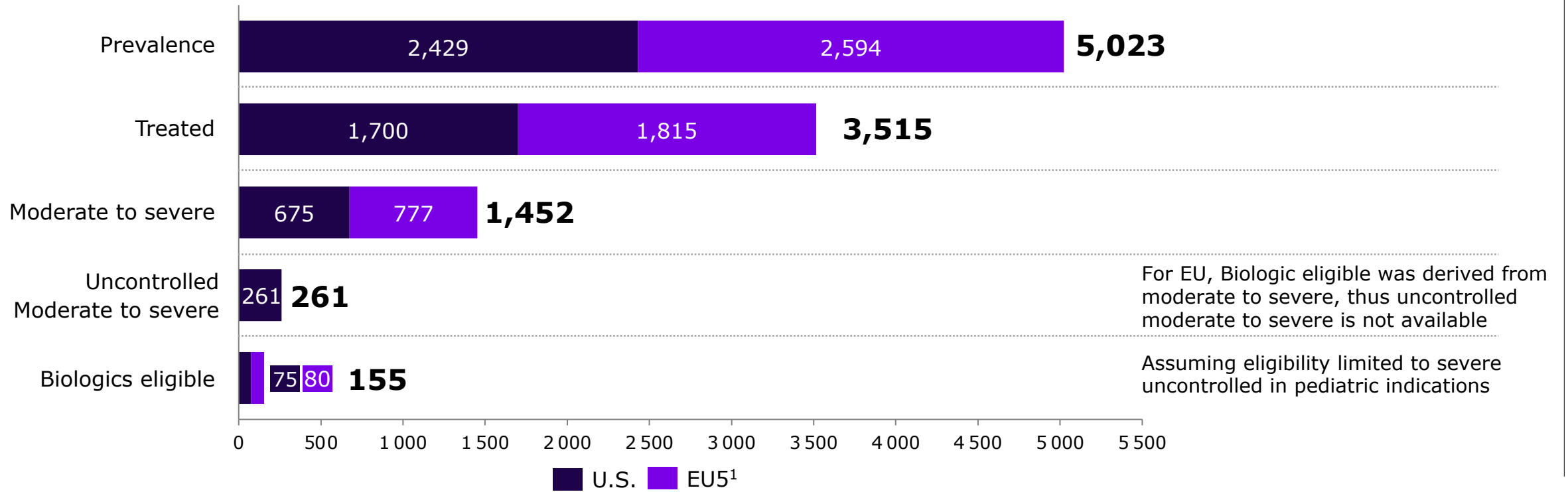
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Atopic Dermatitis (AD) Child <6yo

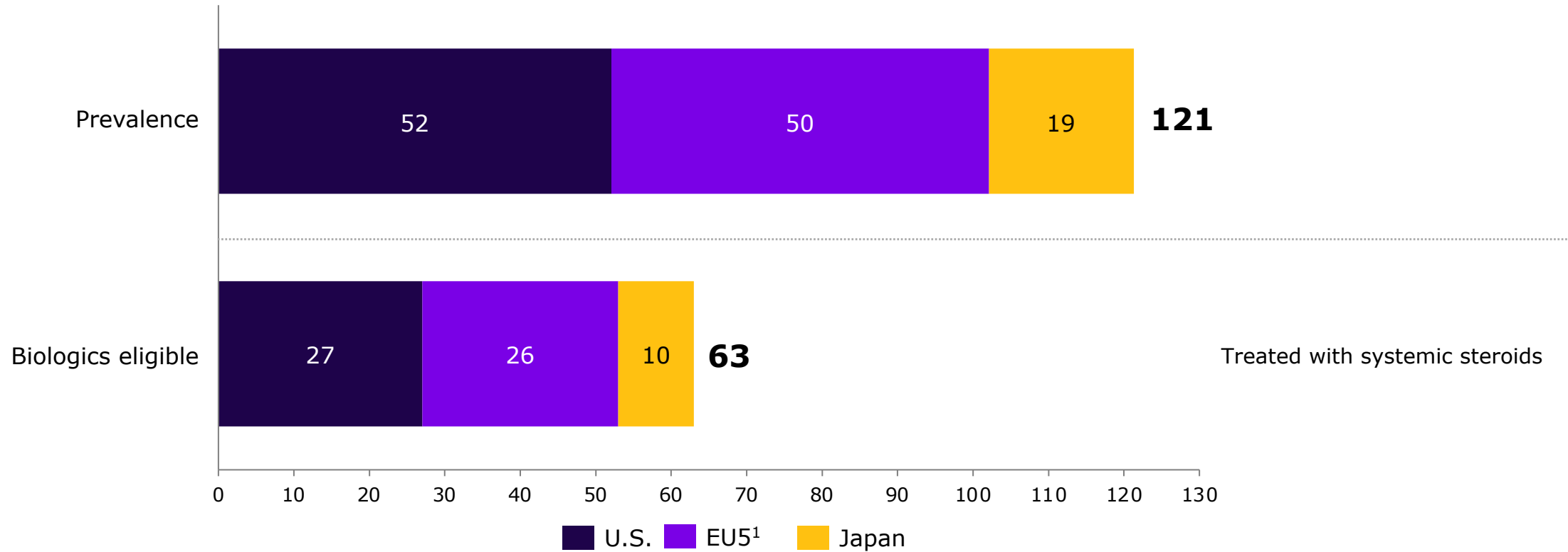
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Bullous Pemphigoid (BP) 18+yo

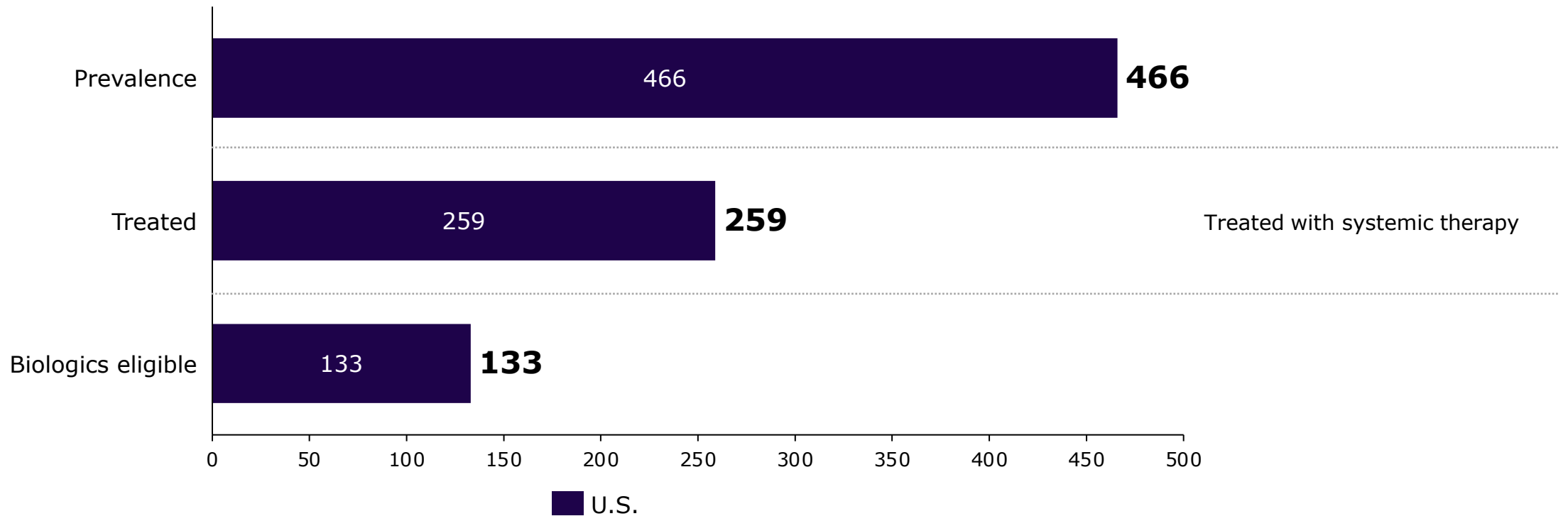
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Chronic Pruritus of Unknown Origin (CPUO) 18+yo

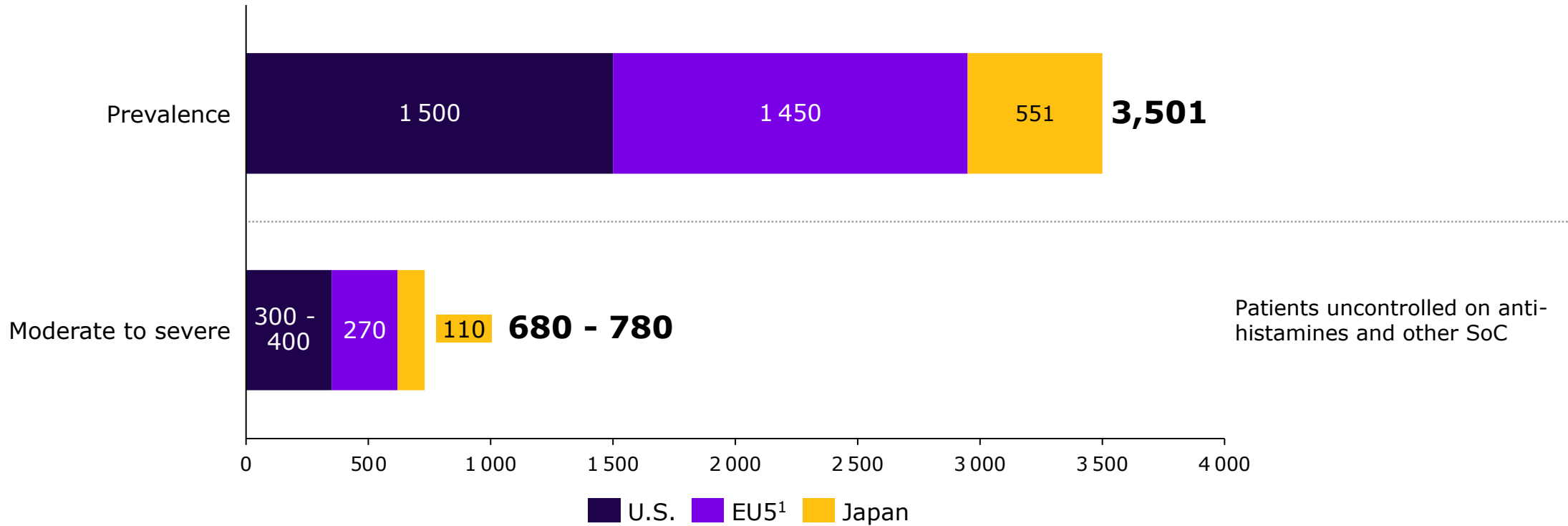
Number of patients (thousands)



Source: Sanofi analysis.

Chronic Spontaneous Urticaria (CSU) 12+yo

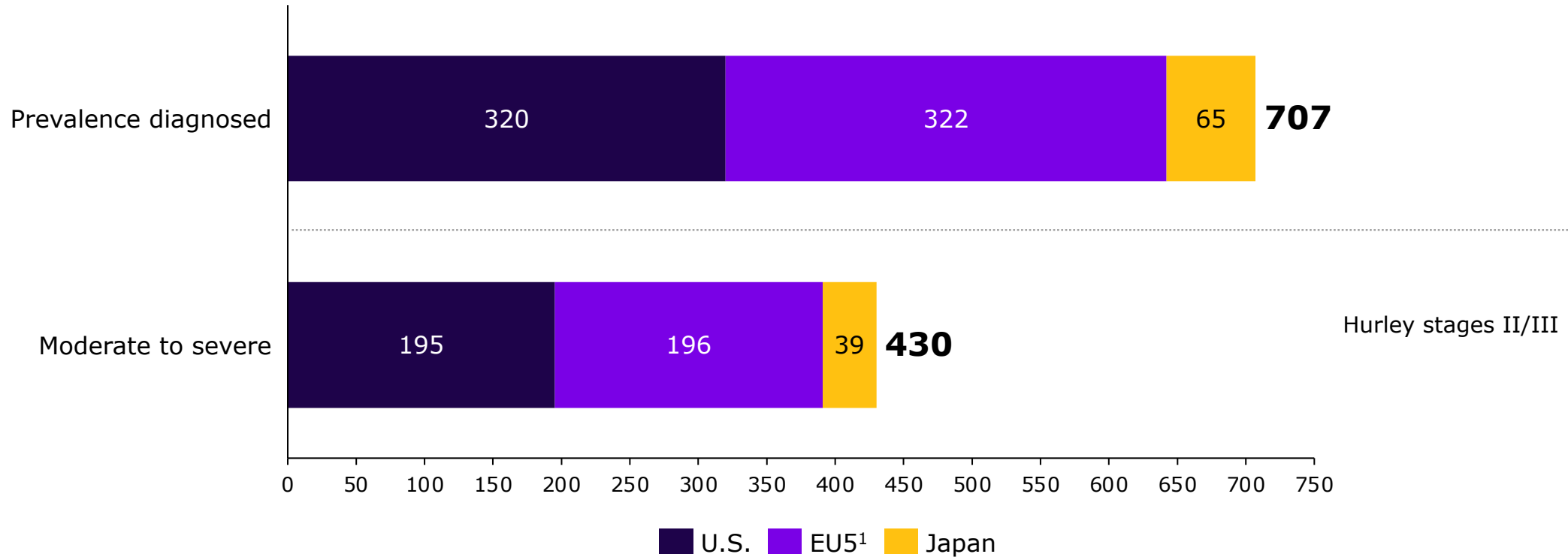
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Hidradenitis Suppurativa (HS)

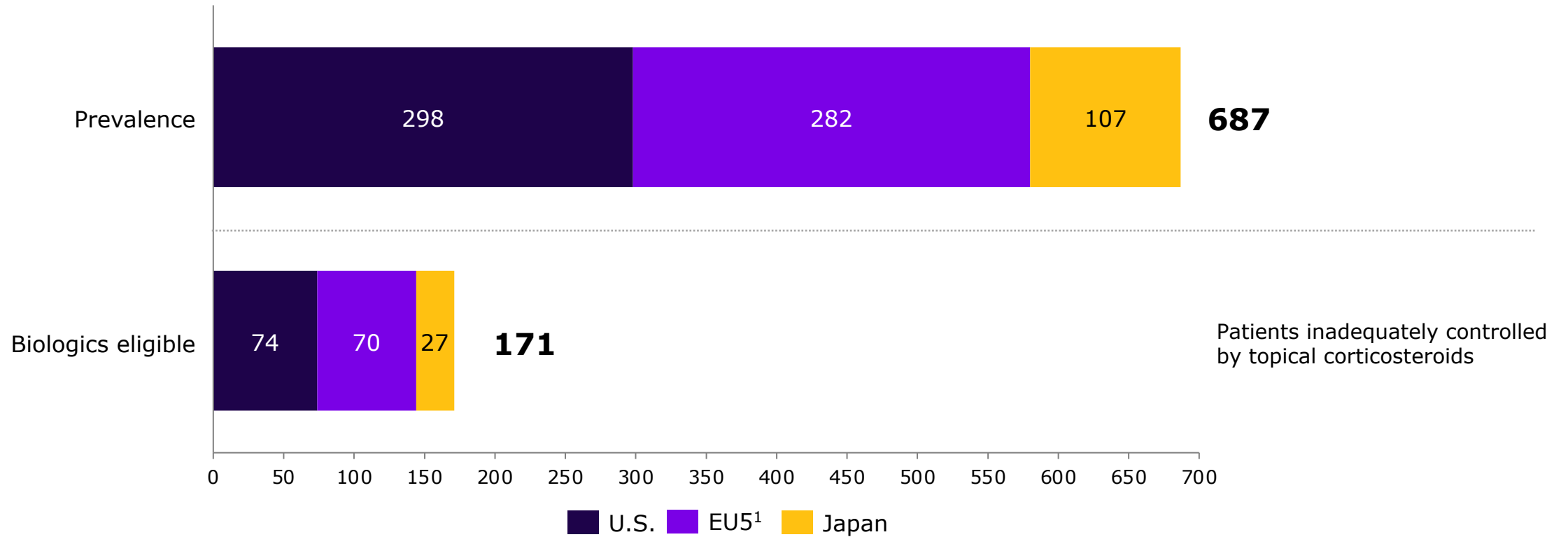
Number of patients (thousands)



Source: Sanofi Analysis; 1. Germany, France, Italy, Spain, and United Kingdom.

Prurigo Nodularis (PN) 18+yo

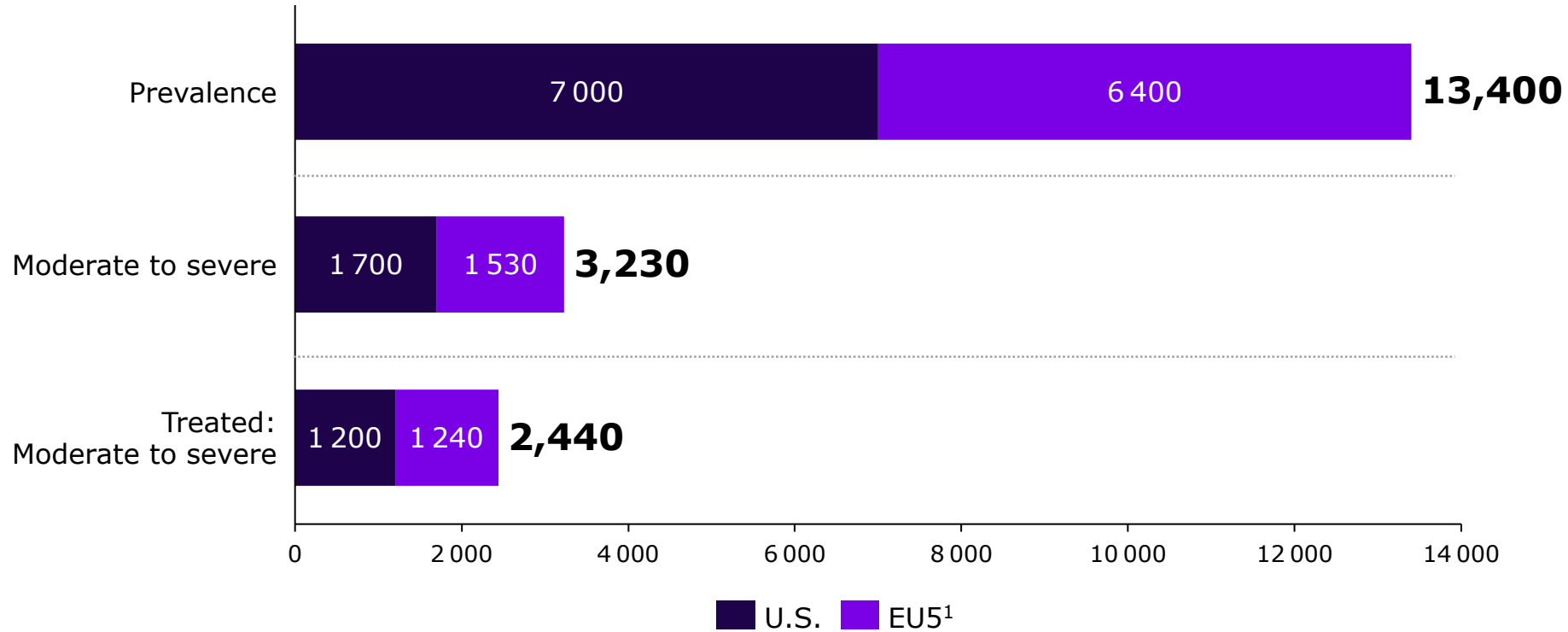
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Psoriasis (PsO) 18+yo

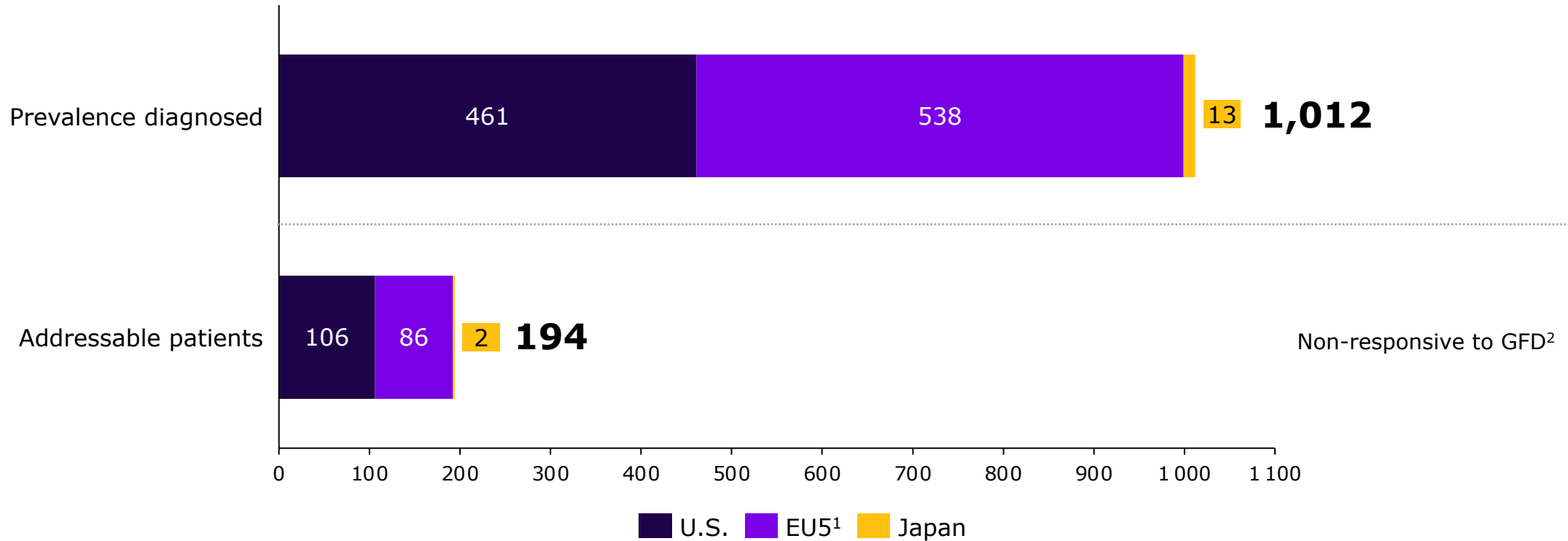
Number of patients (thousands)



Source: Sanofi Analysis; 1. Germany, France, Italy, Spain, and United Kingdom.

Celiac Disease

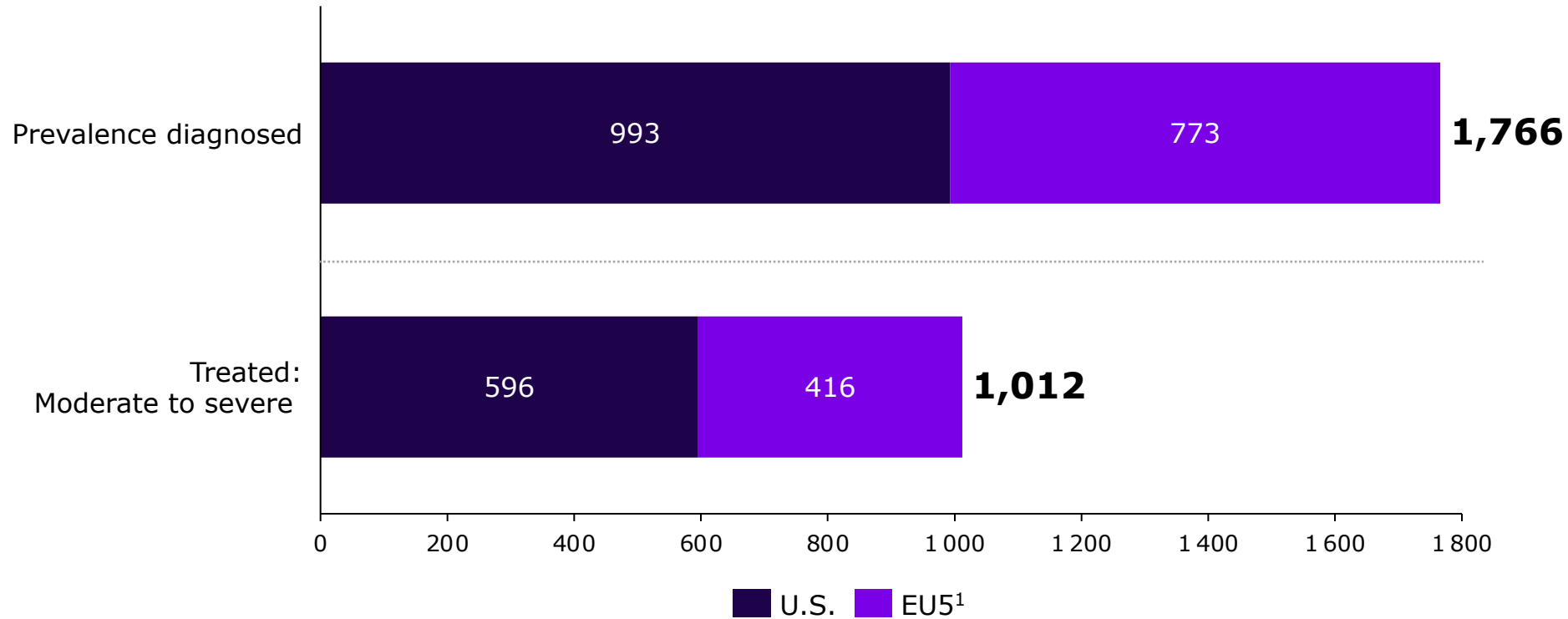
Number of patients (thousands)



Source: Sanofi Analysis; 1. Germany, France, Italy, Spain, and United Kingdom; 2. Assuming 100% utilization of GFD (gluten free diet) as 1L.

Crohn's Disease (CD)

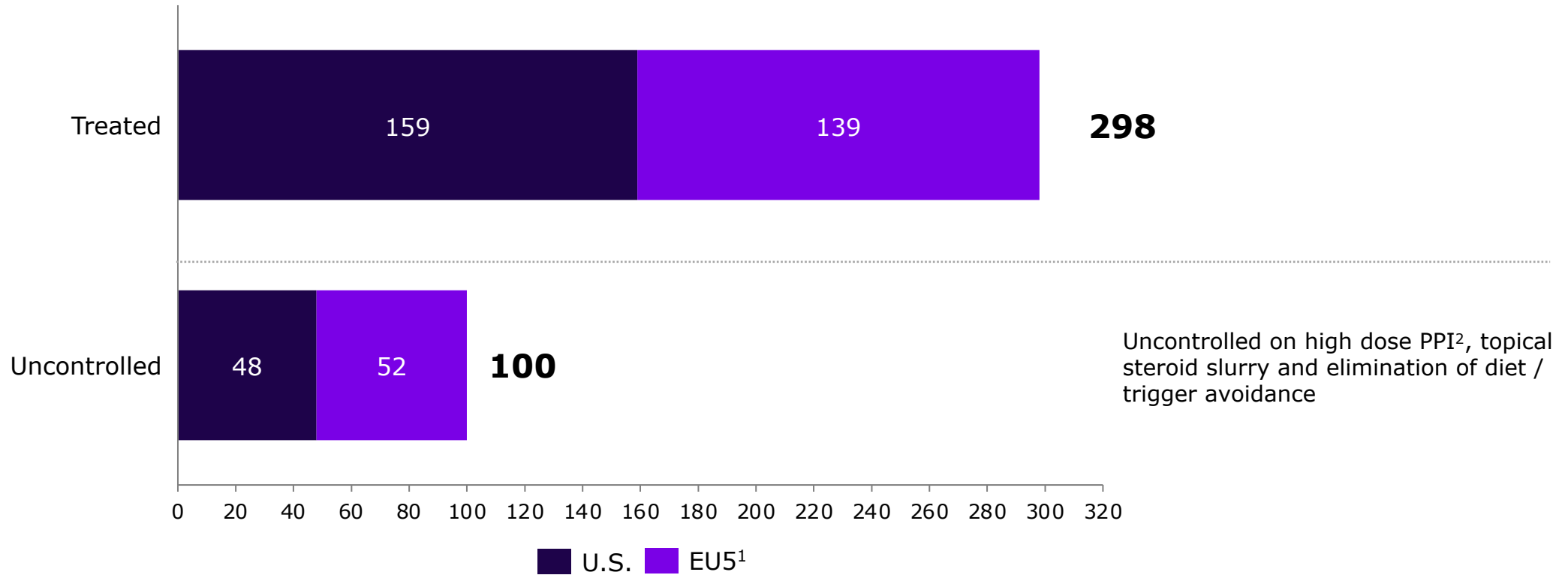
Number of patients (thousands)



Source: Sanofi Analysis; 1. Germany, France, Italy, Spain, and United Kingdom.

Eosinophilic Esophagitis (EoE) 12+yo

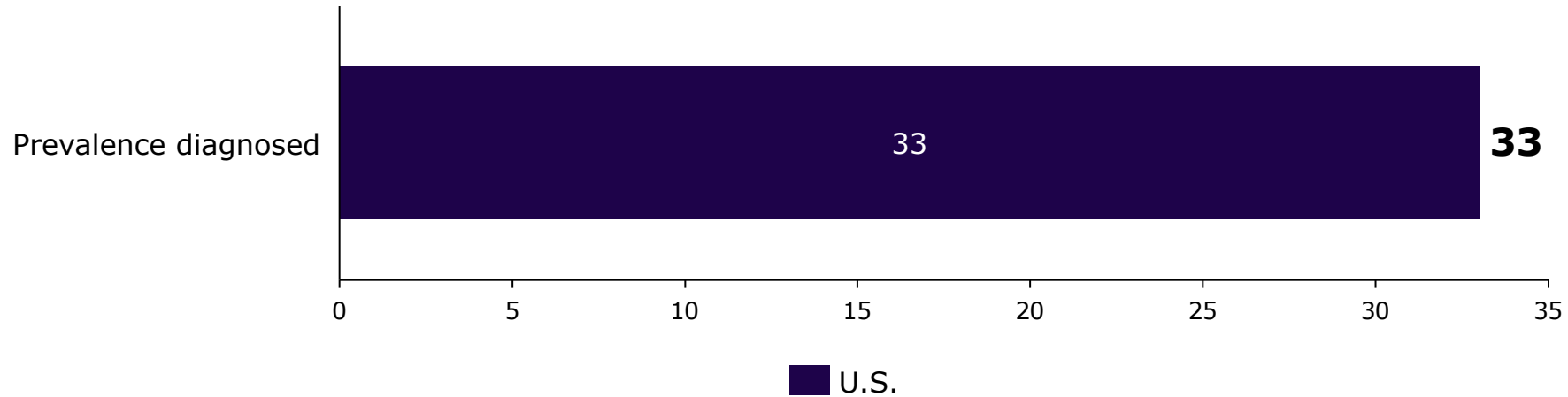
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom; 2. PPI: Proton Pump Inhibitor.

Eosinophilic Gastritis w/wo Eosinophilic Duodenitis

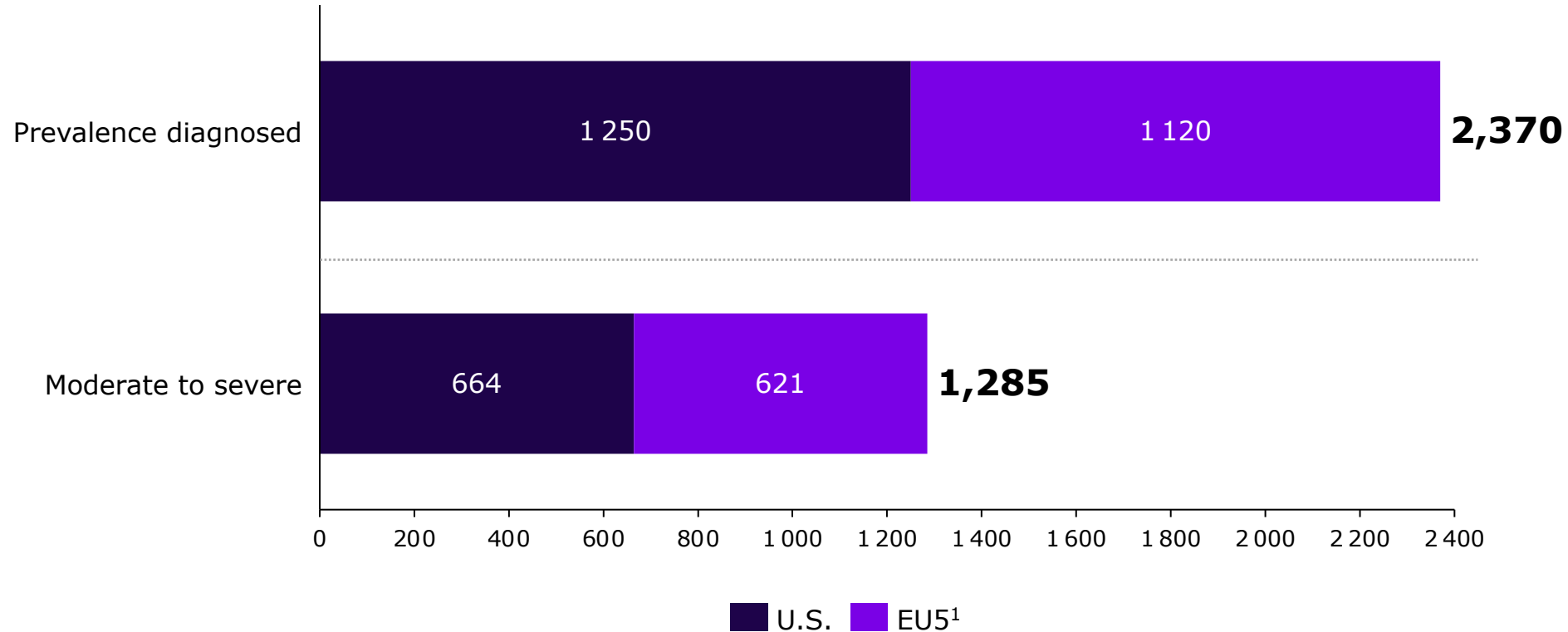
Number of patients (thousands)



Source: Sanofi analysis.

Ulcerative Colitis (UC)

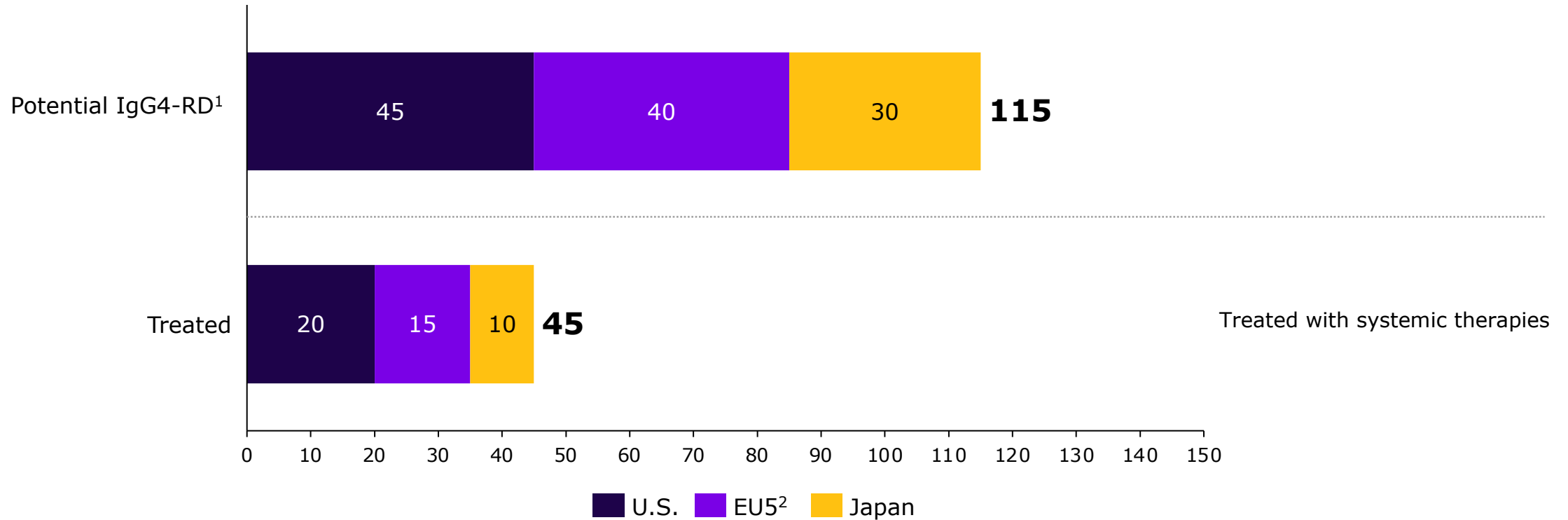
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

IgG4-Related Disease (IgG4-RD)

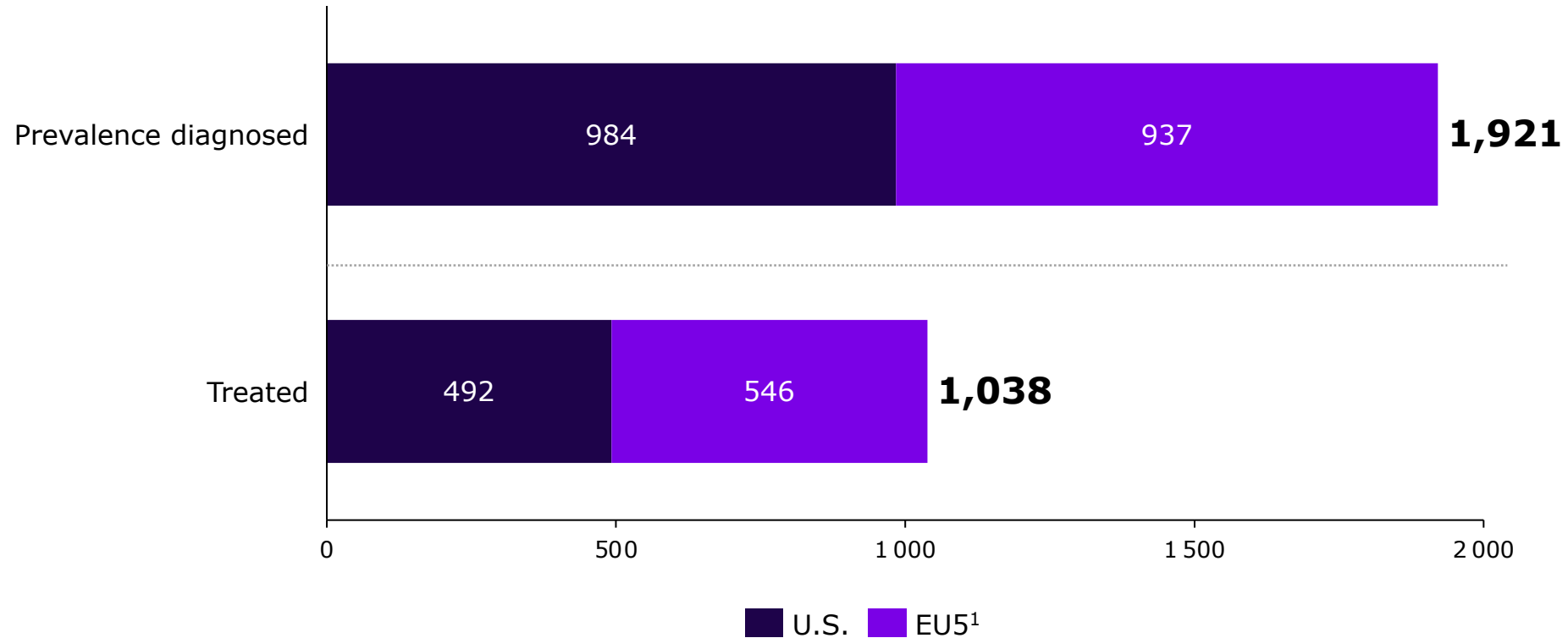
Number of patients (thousands)



Source in Appendix table; 1. Potential Diagnosed IgG4-RD: Confirmed diagnosed or meets diagnosis criteria & >2 Ig subclass tests (potential). There are currently no specific ICD-9 or ICD-10 codes available for IgG4-RD; 2. Germany, France, Italy, Spain, and United Kingdom.

Psoriatic Arthritis (PsA) 18+yo

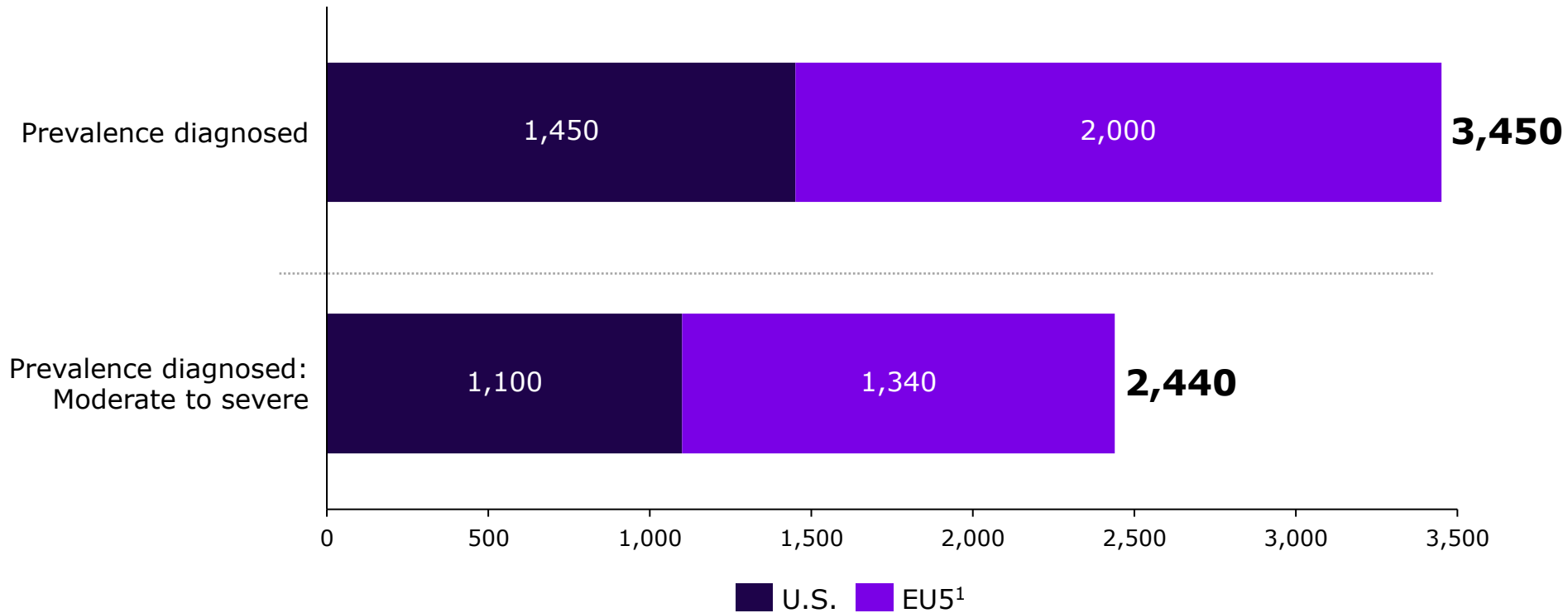
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Rheumatoid Arthritis (RA) 18+yo

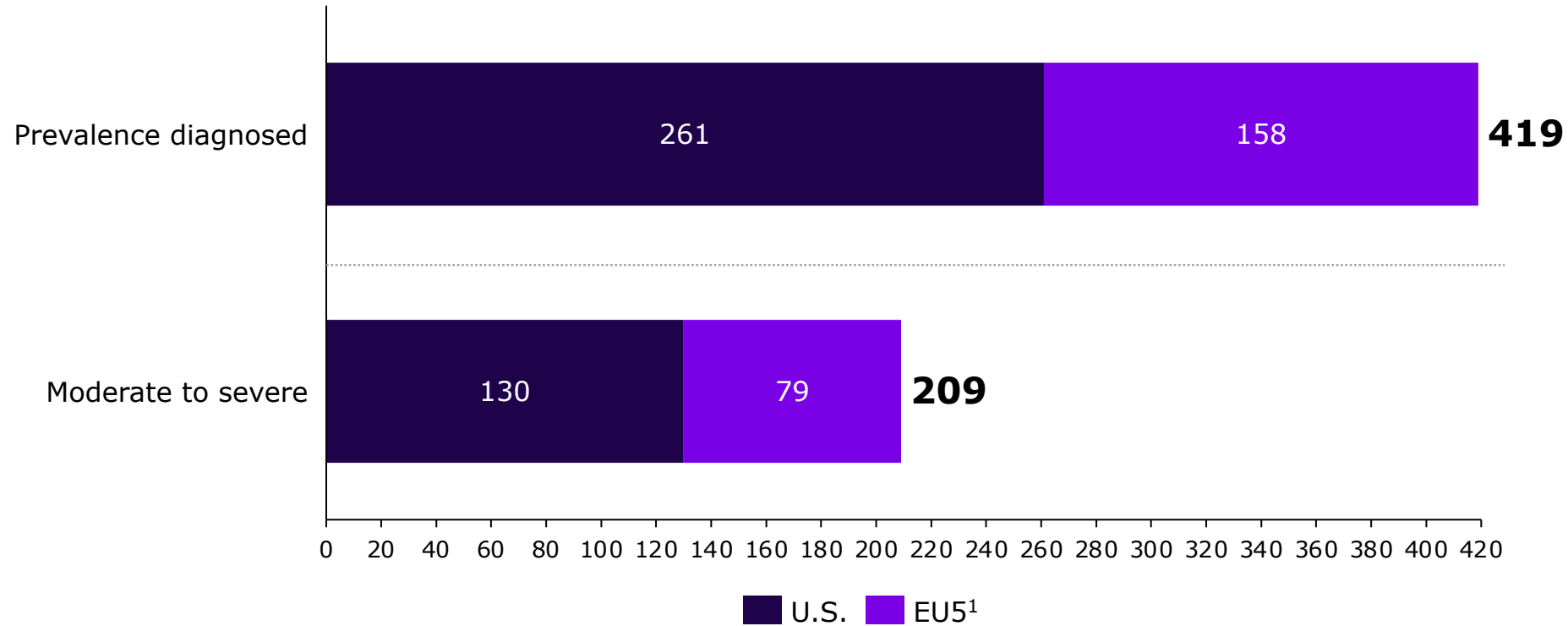
Number of patients (thousands)



Source: Sanofi Analysis; 1. Germany, France, Italy, Spain, and United Kingdom

Sjogren's Syndrome (Primary)

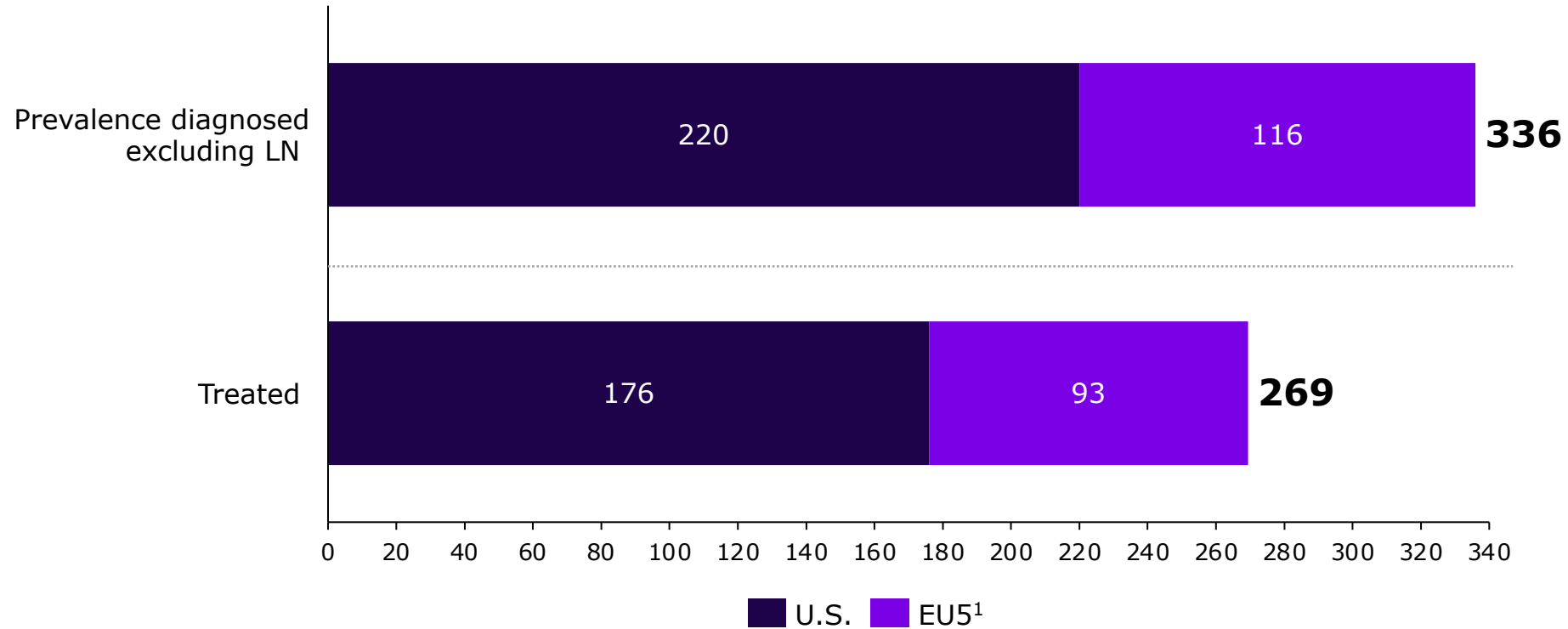
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Systemic Lupus Erythematosus (SLE) excluding LN

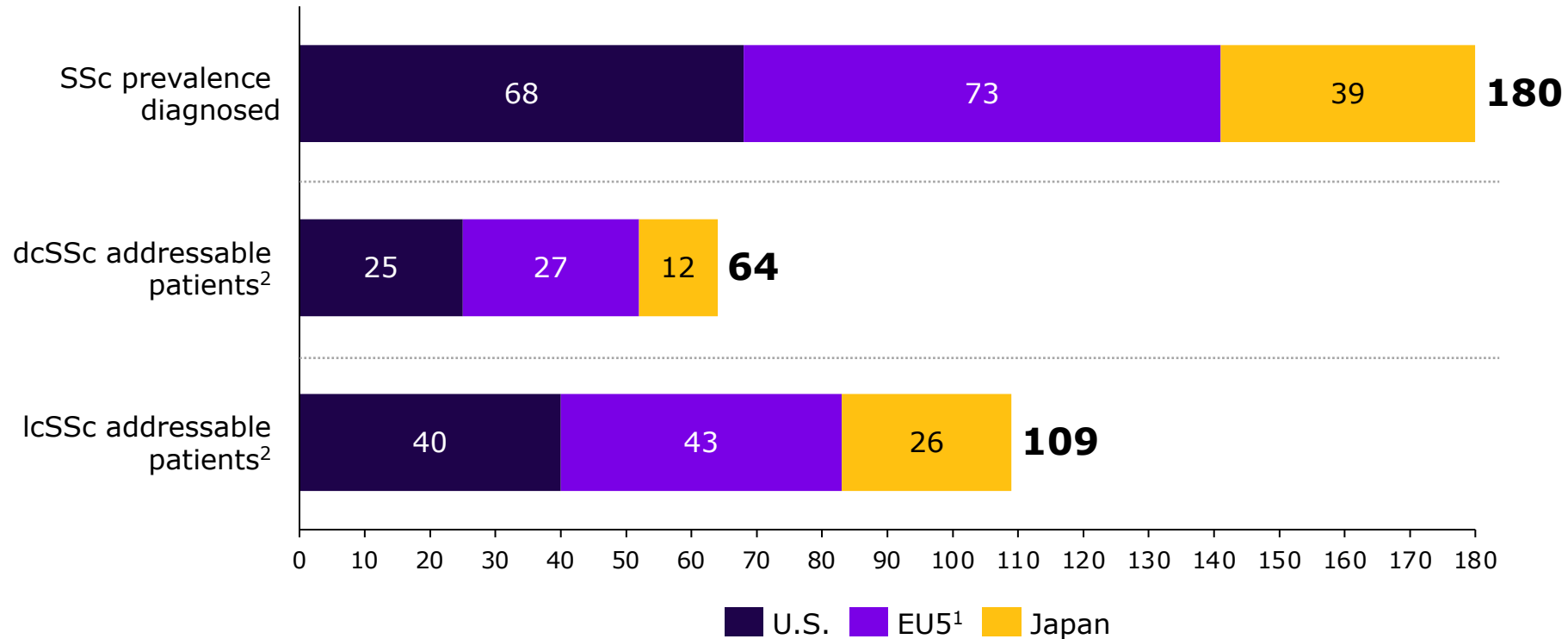
Number of patients (thousands)



Source in Appendix table; LN: Lupus Nephritis; 1. Germany, France, Italy, Spain, and United Kingdom.

Systemic Sclerosis (SSc)

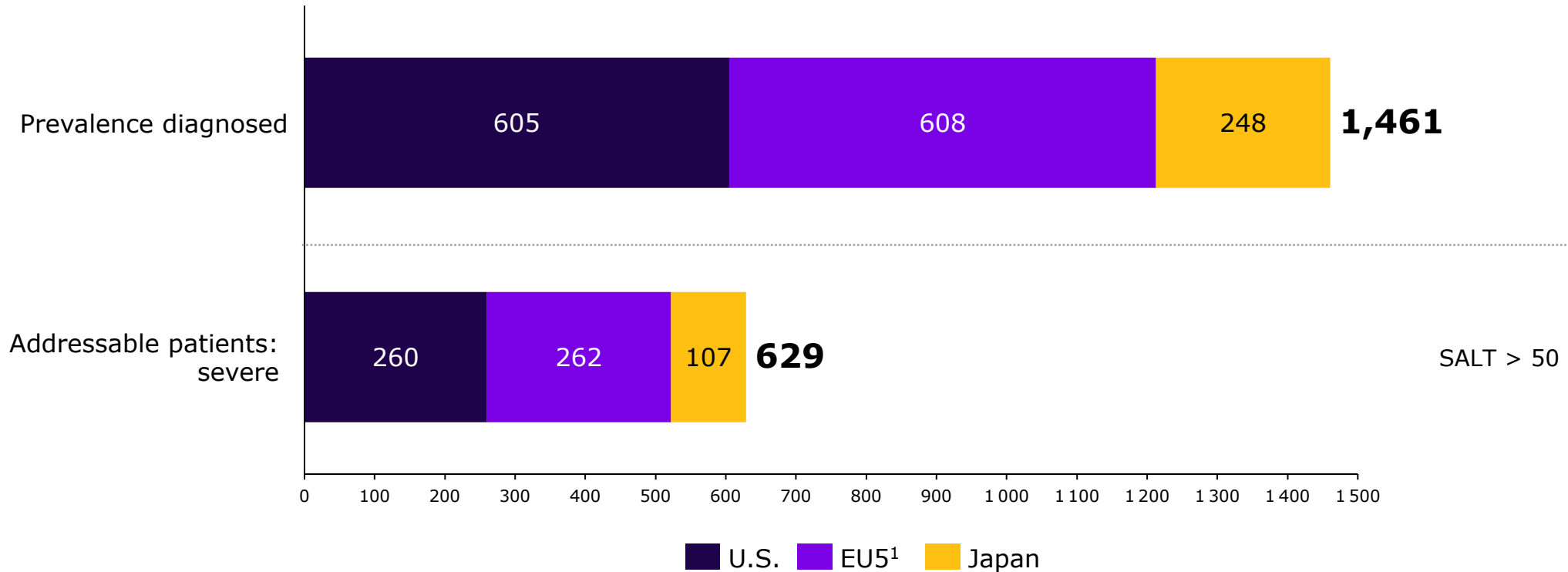
Number of patients (thousands)



Source: Sanofi Analysis; dcSSc: Diffuse cutaneous SSc; lcSSc: limited cutaneous SSc; 1. Germany, France, Italy, Spain, and United Kingdom; 2. Patients with overlapping SSc subtype or sine scleroderma represent 4% of patients.

Alopecia Areata (AA)

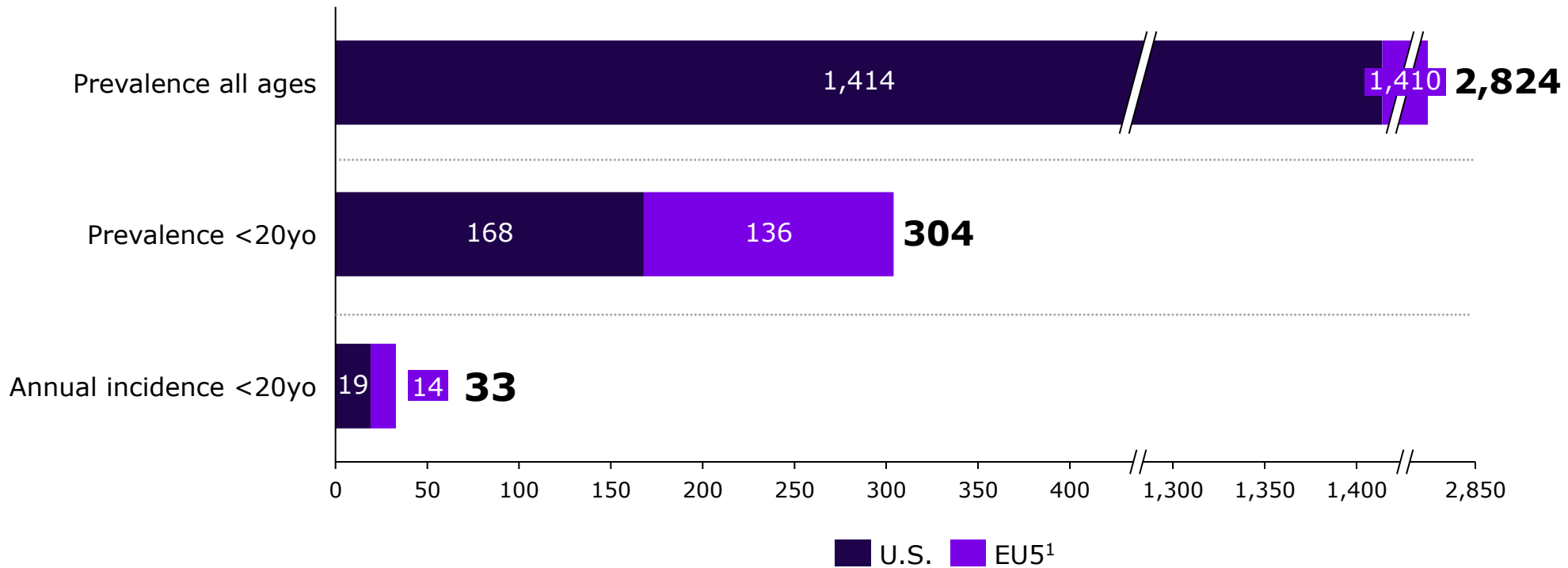
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Type 1 Diabetes (T1D)

Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

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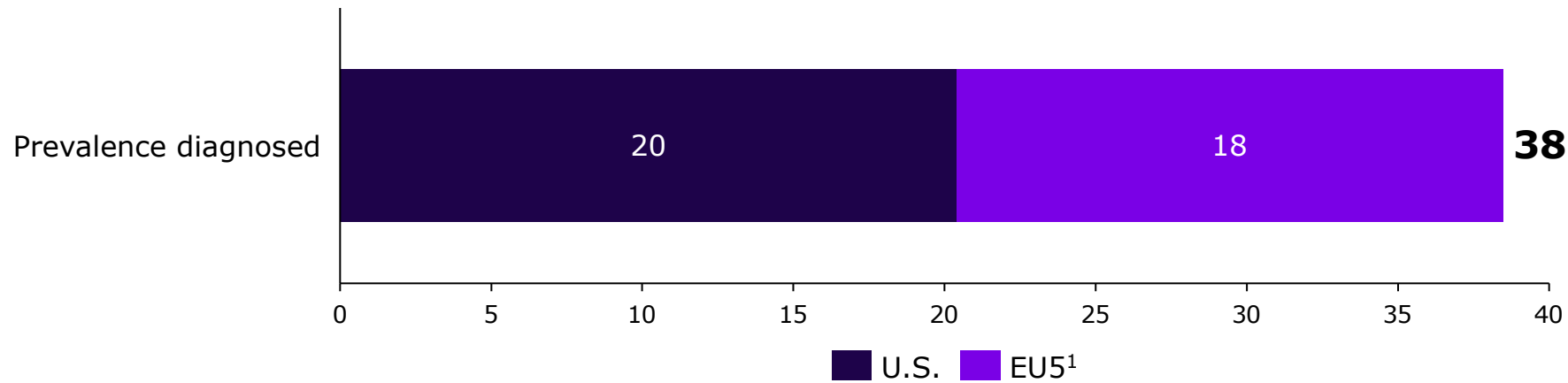
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Amyotrophic Lateral Sclerosis (ALS)

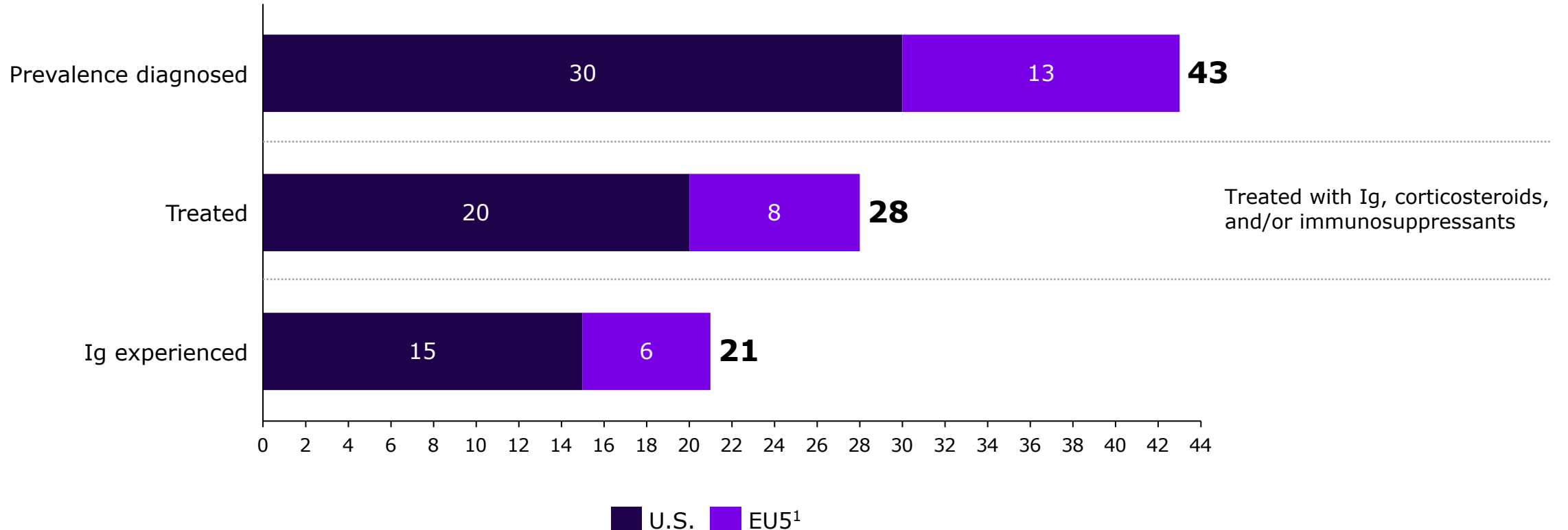
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Chronic Inflammatory Demyelinating Polyneuropathy

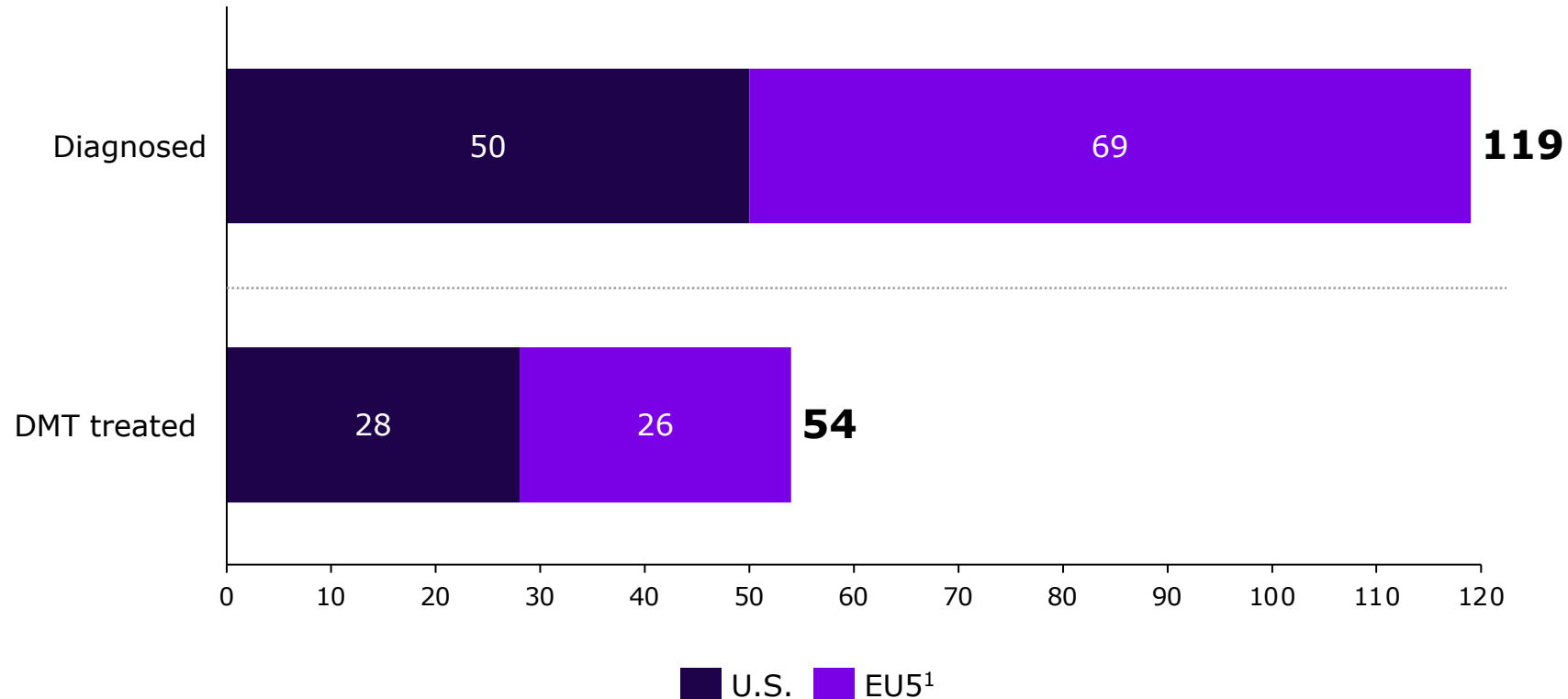
Number of patients (thousands)



Source in Appendix table; Ig: Immunoglobulin; 1. Germany, France, Italy, Spain, and United Kingdom.

Primary Progressive Multiple Sclerosis (PPMS)

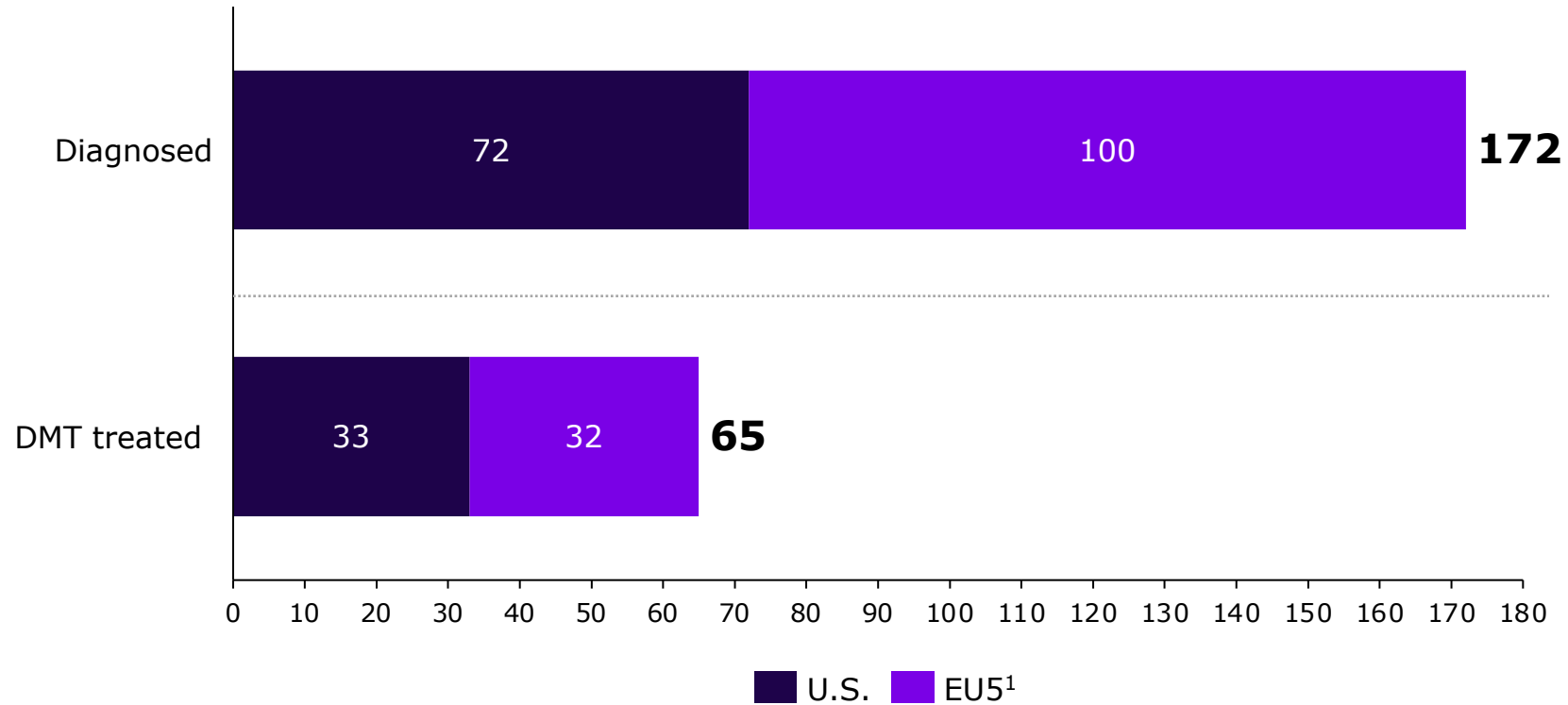
Number of patients (thousands)



Source in Appendix table; DMT: Disease-Modifying Therapy; 1. Germany, France, Italy, Spain, and United Kingdom;

Non-Relapsing Secondary Progressive MS (nrSPMS)

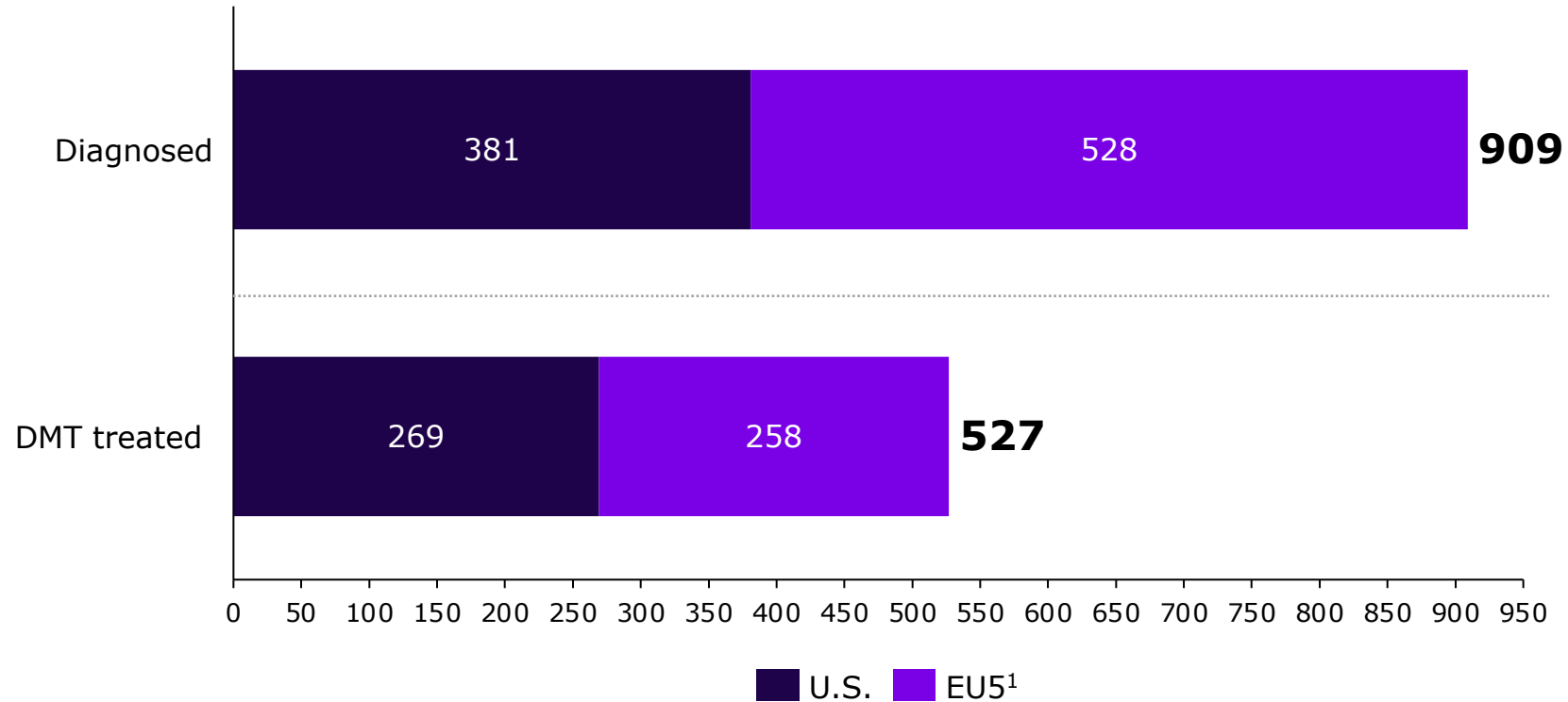
Number of patients (thousands)



Source in Appendix table; DMT: Disease-Modifying Therapy; 1. Germany, France, Italy, Spain, and United Kingdom;

Relapsing Forms of Multiple Sclerosis (RMS)

Number of patients (thousands)



Source in Appendix table; DMT: Disease-Modifying Therapy; 1. Germany, France, Italy, Spain, and United Kingdom;

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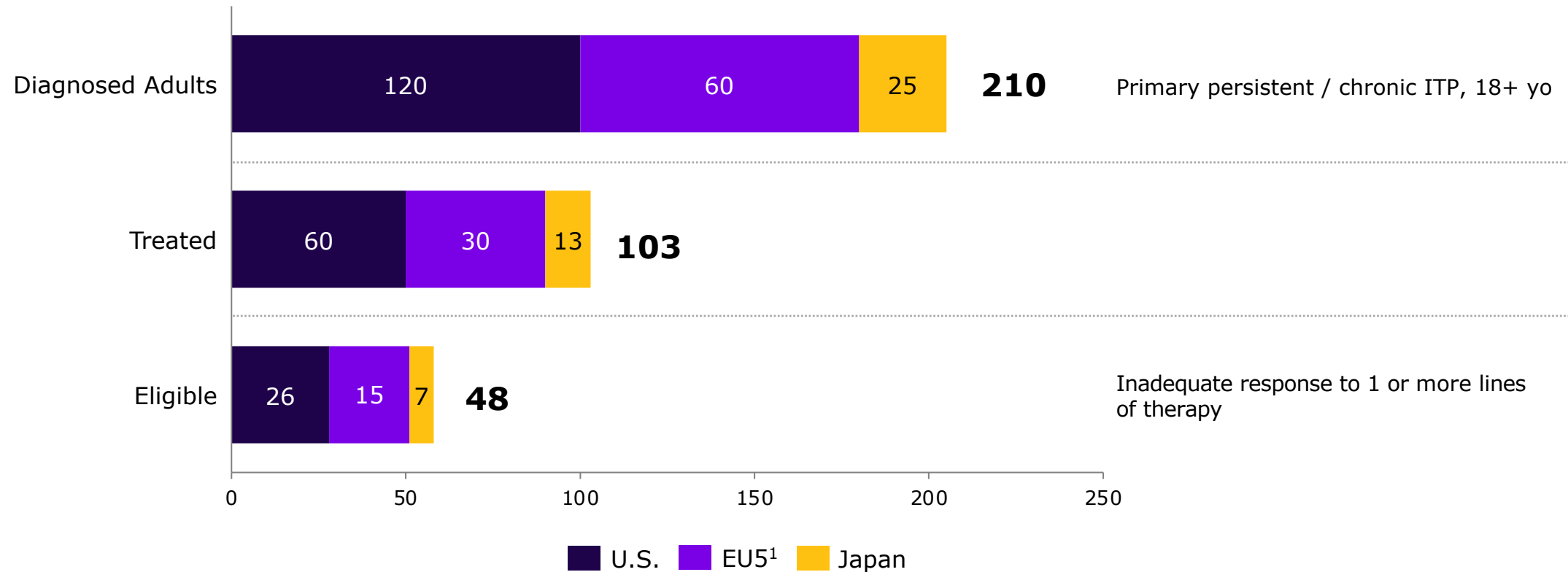
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Immune Thrombocytopenia (ITP)

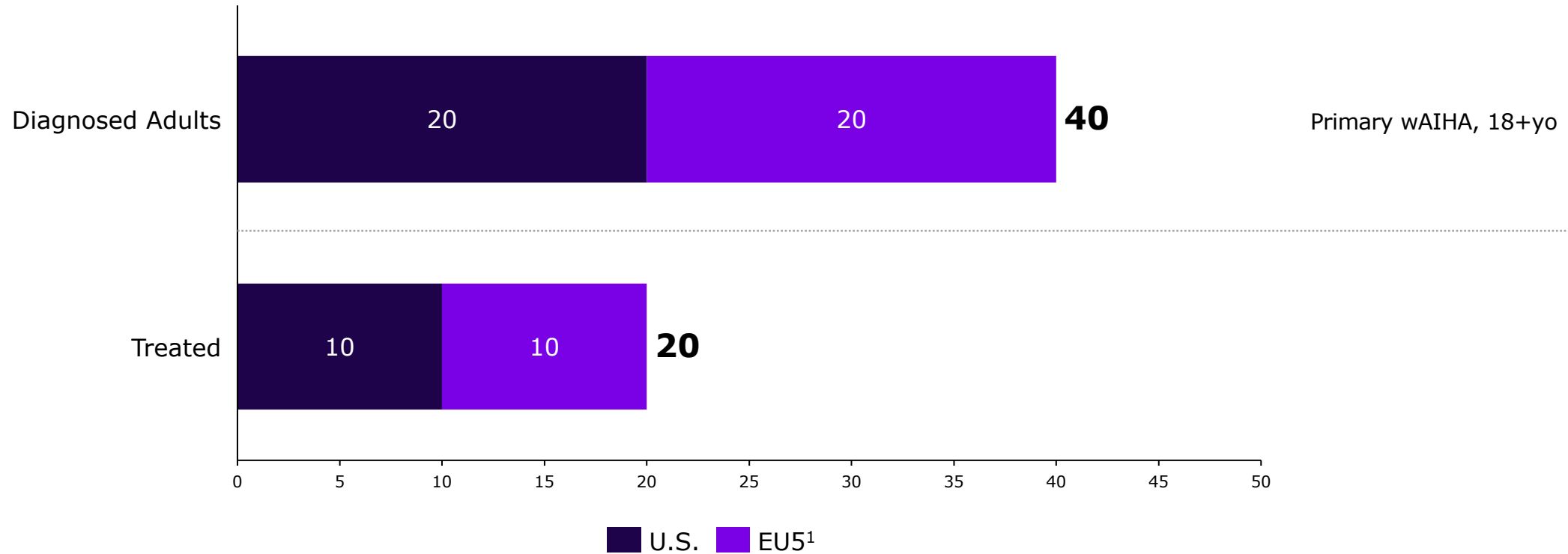
Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Warm Autoimmune Hemolytic Anemia (wAIHA)

Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

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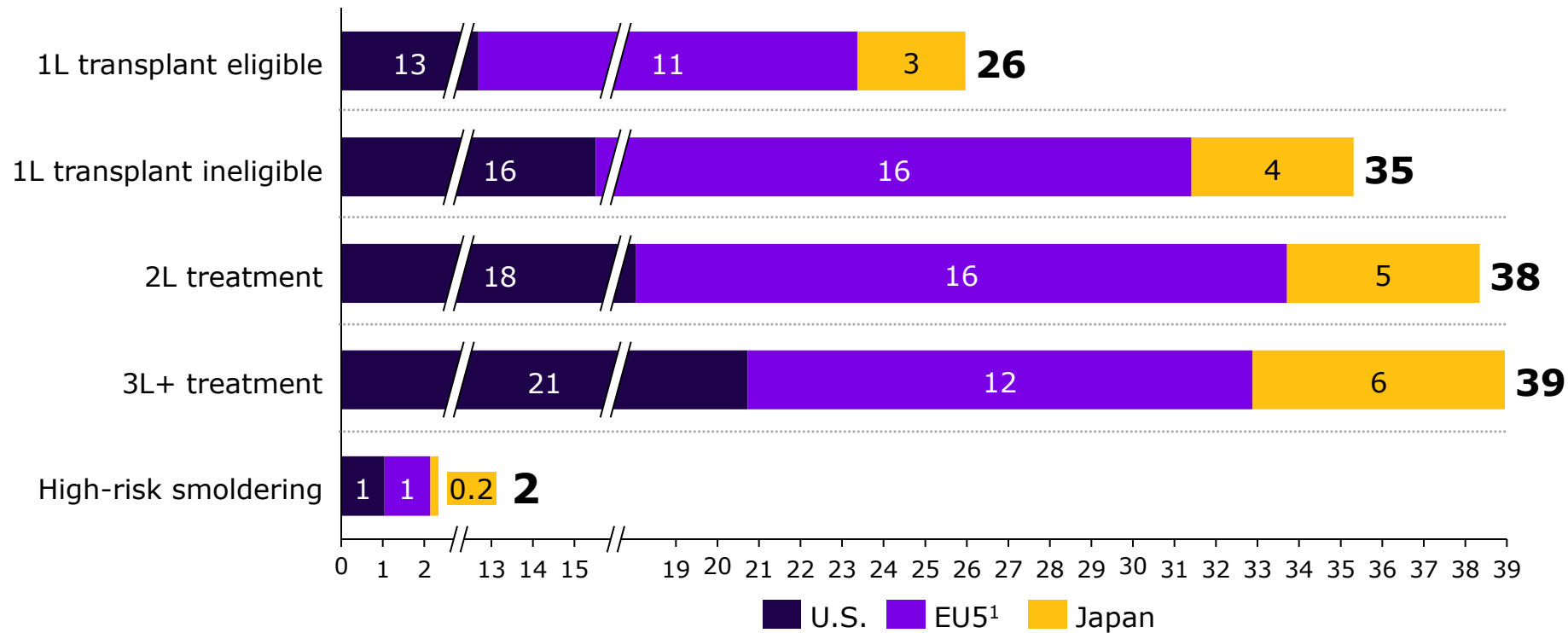
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Multiple Myeloma (MM)

Number of patients (thousands)



Source in Appendix table; 1. Germany, France, Italy, Spain, and United Kingdom.

Appendix

Sources

Immunology & Inflammation

Indication	Sources
Alopecia Areata (AA)	U.S./EU5: Benigno M, et al. (2020); Japan: Tinglin W, et al. (2009); Soh BW, et al. (2019)
Asthma 12+yo	Sanofi analysis
Asthma 6-11yo	Sanofi analysis
Atopic Dermatitis (AD) Child <6yo	Sanofi analysis
Atopic Dermatitis (AD) 12-17yo	Sanofi analysis
Atopic Dermatitis (AD) 18+yo	Sanofi analysis
Atopic Dermatitis (AD) Child 6-11yo	Sanofi analysis
Bullous Pemphigoid (BP) 18+yo	Sanofi analysis
Celiac Disease	U.S.: Casella S, et al. (2012); Biagi F, et al. (2014); Optum (2021); EU5/Japan: Casella S, et al. (2012); Biagi F, et al. (2014); Katz KD, et al. (2011); Choung RS, et al. (2016); DRG Epidemiology Report
Chronic Pruritus of Unknown Origin (CPUO) 18+yo	Sanofi analysis
Chronic Rhinosinusitis with Nasal Polyposis (CRSwNP)	Sanofi analysis
Chronic Obstructive Pulmonary Disease (COPD)	Sanofi analysis
Crohn's Disease (CD)	Sanofi analysis
Chronic Spontaneous Urticaria (CSU) 12+yo	Sanofi analysis

Sources

Immunology & Inflammation

Indication	Sources
Eosinophilic Esophagitis (EoE) 12+yo	Sanofi analysis
Eosinophilic Gastritis w or w/o Eosinophilic Duodenitis (EGE)	Sanofi analysis
Hidradenitis Suppurativa (HS)	U.S./EU5: Optum (2021); DRG Epidemiology Report; Japan: Lee DE, et al. (2017); Garg A, et al. (2020); Hayama K, et al. (2020); Kurokawa I, et al. (2015); Omine T, et al. (2020)
IgG4-Related Disease (IgG4-RD)	Sanofi analysis
Prurigo Nodularis (PN) 18+yo	Sanofi analysis
Psoriatic arthritis (PsA) 18+yo	DRG Epidemiology Report (2021)
Psoriasis (PsO) 18+yo	DRG Epidemiology Report (2021)
Rheumatoid Arthritis (RA) 18+yo	Hunter TM, et al. (2017); Myasoedova E, et al. (2010)
Sjogren's Syndrome (Primary)	DRG Epidemiology Report (2018); Maciel G, et al. (2017)
Systemic Lupus Erythematosus (SLE) excluding LN	DRG Epidemiology report (2018)
Systemic Sclerosis (SSc)	U.S.: Fan Y, et al. (2020); EU5: Coi A, et al. (2021); Japan: Kuwana M, et al. (2022)
Type 1 Diabetes (T1D)	Gregory GA, et al. (2022); Onkamo P, et al. (1999)
Ulcerative Colitis (UC)	Sanofi analysis

Sources

Neuroinflammation

Indication	Sources
Amyotrophic Lateral Sclerosis (ALS)	Miller C, et al. (2021); Sanofi analysis
Chronic Inflammatory Demyelinating Polyneuropathy (CIDP)	Symphony (2019); Market Clarity; Sanofi analysis
Non-Relapsing Secondary Progressive MS (nrSPMS)	Sanofi analysis
Primary Progressive Multiple Sclerosis (PPMS)	Sanofi analysis
Relapsing Forms of Multiple Sclerosis (RMS)	Sanofi analysis

Rare Blood Diseases

Indication	Sources
Immune thrombocytopenia (ITP)	Optum (2021), González-López TJ, et al. (2022); Witkowski M, et al. (2019); Wei Y, et al. (2016); Bennet D, et al (2011); Perrone et al, (2021); Feudjo et al. (2008); Cooper N, et al. (2019).
Warm autoimmune hemolytic anemia (wAIHA)	Sanofi analysis

Oncology

Indication	Sources
Multiple Myeloma (MM)	DRG Epidemiology Report (2022)