**Supplemental Table 1. Physician characteristics**

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|  | **FRANCE** | **GERMANY** | **ITALY** | **SPAIN** |
|  | **N=28** | **N=17** | **N=38** | **N=21** |
| **Migraine patients treated in 2017, mean ± SD** | 207.50 ± 283.87 | 339.06 ± 381.43 | 309.61 ± 257.19 | 364.76 ± 204.32 |
| **Years of experience, mean ± SD** | 18.14 ± 6.82 | 14.29 ± 6.38 | 12.58 ± 7.69 | 14.81 ± 5.76 |
| **Primary practice setting, n (%)** |  |  |  |  |
| Academic hospital/teaching hospital/tertiary hospital | 9 (32.14%) | 7 (41.18%) | 25 (65.79%) | 16 (76.19%) |
| Community hospital/general hospital | 11 (39.29%) | 1 (5.88%) | 11 (28.95%) | 5 (23.81%) |
| Private practice | 8 (28.57%) | 9 (52.94%) | 2 (5.26%) | 0 (0.00%) |
| **Total number of neurologists/headache specialists in practice, n (%)** |  |  |  |  |
| 1-5 | 23 (82.14%) | 10 (58.82%) | 26 (68.42%) | 16 (76.19%) |
| 6-10 | 4 (14.29%) | 5 (29.41%) | 10 (26.32%) | 2 (9.52%) |
| 11-25 | 1 (3.57%) | 1 (5.88%) | 2 (5.26%) | 2 (9.52%) |
| 26-50 | 0 (0.00%) | 1 (5.88%) | 0 (0.00%) | 0 (0.00%) |
| Unknown/not sure | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (4.76%) |
| **Physician specialty, n (%)** |  |  |  |  |
| Neurologist | 25 (89.29%) | 16 (94.12%) | 22 (57.89%) | 15 (71.43%) |
| Headache specialist | 4 (14.29%) | 3 (17.65%) | 22 (57.89%) | 9 (42.86%) |
| Pain specialist | 1 (3.57%) | 1 (5.88%) | 8 (21.05%) | 0 (0.00%) |

**Caption**: SD = standard deviation.

**Supplemental Table 2. Characteristics of patients with two or more failed prophylactics for migraine**

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|  | **FRANCE** | **GERMANY** | **ITALY** | **SPAIN** |  |
|  | **N = 51** | **N = 28** | **N = 44** | **N = 45** |  |
| **Age at index date (years), mean ± SD** | 40.11 ± 11.47 | 35.11 ± 9.05 | 34.48 ± 9.42 | 39.22 ± 10.62 |  |
| **Sex, n (%)** |  |  |  |  |  |
| Female | 32 (62.75%) | 20 (71.43%) | 24 (54.55%) | 30 (66.67%) |  |
| Male | 19 (37.25%) | 8 (28.57%) | 20 (45.45%) | 15 (33.33%) |  |
| **Weight (kg), mean ± SD** | 68.74 ± 12.03 | 75.83 ± 11.07 | 70.41 ± 9.98 | 74.49 ± 20.40 |  |
| **BMI score, mean ± SD** | 23.37 ± 3.02 | 25.96 ± 3.64 | 23.79 ± 2.84 | 25.43 ± 3.04 |  |
| **Employment status in the month prior to the index date, n (%)** |  |  |  |  |  |
| Full time | 30 (58.82%) | 15 (53.57%) | 21 (47.73%) | 30 (66.67%) |  |
| Part time | 3 (5.88%) | 8 (28.57%) | 9 (20.45%) | 4 (8.89%) |  |
| Unemployed | 8 (15.69%) | 1 (3.57%) | 5 (11.36%) | 5 (11.11%) |  |
| Student | 5 (9.80%) | 2 (7.14%) | 7 (15.91%) | 0 (0.00%) |  |
| Retired | 4 (7.84%) | 0 (0.00%) | 0 (0.00%) | 2 (4.44%) |  |
| Other | 1 (1.96%) | 0 (0.00%) | 1 (2.27%) | 3 (6.67%) |  |
| Unknown/not sure | 0 (0.00%) | 2 (7.14%) | 1 (2.27%) | 1 (2.22%) |  |
| **Comorbidities prior to index date, n (%)** |  |  |  |  |  |
| AIDS/HIV | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Anemia | 0 (0.00%) | 2 (7.14%) | 1 (2.27%) | 0 (0.00%) |  |
| Anxiety | 15 (29.41%) | 3 (10.71%) | 13 (29.55%) | 12 (26.67%) |  |
| Asthma | 1 (1.96%) | 0 (0.00%) | 1 (2.27%) | 4 (8.89%) |  |
| Any malignancy excluding malignant neoplasm of skin,   including leukemia and lymphoma | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (2.22%) |  |
| Cerebrovascular disease excluding stroke and transient   ischemic attack | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Chronic pulmonary disease | 1 (1.96%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Congestive heart failure | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Constipation | 4 (7.84%) | 2 (7.14%) | 7 (15.91%) | 1 (2.22%) |  |
| Dementia | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Depression | 10 (19.61%) | 10 (35.71%) | 12 (27.27%) | 6 (13.33%) |  |
| Diabetes with chronic complication | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Diabetes without chronic complication | 1 (1.96%) | 1 (3.57%) | 0 (0.00%) | 0 (0.00%) |  |
| Diarrhea | 0 (0.00%) | 0 (0.00%) | 2 (4.55%) | 1 (2.22%) |  |
| Epilepsy | 3 (5.88%) | 1 (3.57%) | 0 (0.00%) | 0 (0.00%) |  |
| Hemiplegia or paraplegia | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Hypertension | 6 (11.76%) | 2 (7.14%) | 7 (15.91%) | 10 (22.22%) |  |
| Inflammatory bowel disease | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Metastatic solid tumor | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Mild liver disease | 0 (0.00%) | 1 (3.57%) | 0 (0.00%) | 1 (2.22%) |  |
| Moderate or severe liver disease | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Myocardial infarction | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Obesity | 1 (1.96%) | 4 (14.29%) | 3 (6.82%) | 9 (20.00%) |  |
| Peptic ulcer disease | 2 (3.92%) | 2 (7.14%) | 0 (0.00%) | 1 (2.22%) |  |
| Peripheral vascular disease | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Renal disease | 0 (0.00%) | 0 (0.00%) | 1 (2.27%) | 0 (0.00%) |  |
| Rheumatologic disease | 0 (0.00%) | 1 (3.57%) | 1 (2.27%) | 3 (6.67%) |  |
| Stroke | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Transient ischemic attack | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Visceral pain | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |  |
| Other conditiona | 2 (3.92%) | 0 (0.00%) | 2 (4.55%) | 0 (0.00%) |  |
| No other conditions | 25 (49.02%) | 13 (46.43%) | 14 (29.55%) | 17 (37.78%) |  |
|  |  |  |  |  |  |

Caption: AIDS/HIV = acquired immunodeficiency syndrome/human immunodeficiency virus; BMI = body mass index; SD = standard deviation.

a Other conditions included Hashimoto’s disease, irritable bowel syndrome, multiple sclerosis, and turbinate hypertrophy.

**Supplemental Table 3. Disease characteristics of patients with two or more failed prophylactics for migraine**

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|  | **FRANCE** | **GERMANY** | **ITALY** | **SPAIN** |
| **N = 51** | **N = 28** | **N = 44** | **N = 45** |
| **Time since initiation of first prophylactic treatment (years), mean ± SD** | 4.12 ± 2.59 | 4.16 ± 5.17 | 2.86 ± 2.65 | 2.83 ± 2.93 |
| **Days of work/school missed due to migraine in the month**  **prior to the index date, mean ± SD** | 4.93 ± 4.27 | 6.12 ± 4.76 | 5.97 ± 3.50 | 4.73 ± 7.14 |
| **Loss of productivity at work/school due to migraine in the month prior to the index date, n (%)** |  |  |  |  |
| Yes | 29 (76.32%) | 18 (72.00%) | 34 (91.89%) | 27 (79.41%) |
| No | 6 (15.79%) | 2 (8.00%) | 2 (5.41%) | 7 (20.59%) |
| Unknown/not sure | 3 (7.89%) | 5 (20.00%) | 1 (2.70%) | 0 (0.00%) |
| **Disease characteristics in the month prior to the index date** |  |  |  |  |
| Number of migraine days in the month prior to the index date,   mean ± SD | 8.86 ± 3.48 | 9.79 ± 5.19 | 10.02 ± 4.82 | 11.64 ± 5.23 |
| Average duration of a migraine episode (hours), mean ± SD | 29.67 ± 25.76 | 22.65 ± 17.69 | 13.72 ± 12.38 | 20.60 ± 17.87 |
| Number of non-migraine headache days in the month prior to   the index date, mean ± SD | 6.50 ± 5.61 | 6.95 ± 6.39 | 6.08 ± 4.98 | 7.61 ± 5.86 |
| Average duration of non-migraine headache (hours), mean ±   SD | 17.28 ± 26.20 | 7.36 ± 5.40 | 9.06 ± 6.62 | 14.16 ± 11.44 |

**Caption:** SD = standard deviation.

**Supplemental Table 4. Migraine-related HRU during the six-month study period by patients with two or more failed prophylactics for migraine**

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|  | **FRANCE** | **GERMANY** | **ITALY** | **SPAIN** |
| **N = 51** | **N = 28** | **N = 44** | **N = 45** |
| **Outpatient visits in the physician's office** |  |  |  |  |
| Number of patients, n (%) | 33 (64.71%) | 28 (100.00%) | 38 (86.36%) | 41 (91.11%) |
| Number of visits, mean ± SDa | 2.21 ± 2.06 | 3.39 ± 2.38 | 2.63 ± 2.07 | 2.27 ± 2.00 |
| **ER/A&E visits** |  |  |  |  |
| Number of patients, n (%) | 16 (32.00%) | 3 (12.50%) | 10 (22.73%) | 15 (34.09%) |
| Number of visits, mean ± SDa | 1.69 ± 1.30 | 1.67 ± 0.58 | 4.70 ± 8.93 | 2.87 ± 2.64 |
| **Hospitalizations** |  |  |  |  |
| Number of patients, n (%) | 3 (6.00%) | 6 (23.08%) | 0 (0.00%) | 0 (0.00%) |
| Number of hospitalizations, mean ± SDa | 1.33 ± 0.58 | 1.33 ± 0.52 | - | - |
| Number of days hospitalized, mean ± SDa | 3.33 ± 2.31 | 3.33 ± 1.51 | - | - |
| **Sick days prescribed by the physician** |  |  |  |  |
| Number of patients, n (%) | 8 (20.51%) | 20 (74.07%) | 13 (31.71%) | 6 (15.38%) |
| Number of sick days, mean ± SDa | 5.25 ± 6.48 | 5.15 ± 4.23 | 7.77 ± 6.31 | 20.83 ± 12.69 |
| **Diagnostic migraine-related procedures** |  |  |  |  |
| *Cranial CT scans in the physician's office* |  |  |  |  |
| Number of patients, n (%) | 7 (13.73%) | 3 (10.71%) | 7 (15.91%) | 5 (11.11%) |
| Number of scans, mean ± SDa | 1.57 ± 1.51 | 1.33 ± 0.58 | 1.57 ± 0.79 | 1.20 ± 0.45 |
| *EEGs in the physician's office* |  |  |  |  |
| Number of patients, n (%) | 6 (11.76%) | 9 (32.14%) | 9 (20.45%) | 5 (11.11%) |
| Number of procedures, mean ± SDa | 1.00 ± 0.00 | 1.44 ± 1.01 | 1.56 ± 1.01 | 1.00 ± 0.00 |
| *Cranial and cranio-cervical MRI scans in the physician's*  *office* |  |  |  |  |
| Number of patients, n (%) | 12 (23.53%) | 11 (39.29%) | 10 (22.73%) | 4 (8.89%) |
| Number of scans, mean ± SDa | 1.00 ± 0.00 | 1.00 ± 0.00 | 1.50 ± 0.85 | 1.00 ± 0.00 |
| *Blood tests in the physician's office* |  |  |  |  |
| Number of patients, n (%) | 9 (17.65%) | 17 (60.71%) | 29 (65.91%) | 11 (24.44%) |
| Number of tests, mean ± SDa | 1.67 ± 1.66 | 1.59 ± 0.80 | 2.14 ± 2.15 | 1.73 ± 0.79 |
| **Interventional migraine-related procedures** |  |  |  |  |
| *Nerve stimulator procedures in the physician's office* |  |  |  |  |
| Number of patients, n (%) | 6 (11.76%) | 2 (7.14%) | 2 (4.55%) | 3 (6.67%) |
| Number of procedures, mean ± SDa | 1.83 ± 2.04 | 1.00 ± 0.00 | 3.00 ± 2.83 | 1.33 ± 0.58 |
| *Transcutaneous occipital nerve block procedures in the physician’s office* |  |  |  |  |
| Number of patients, n (%) | 5 (9.80%) | 1 (3.57%) | 1 (2.27%) | 4 (8.89%) |
| Number of procedures, mean ± SDa | 1.00 ± 0.00 | 1.00 ± - | 4.00 ± - | 1.00 ± 0.00 |
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|  |  |  |  |  |
| **Nurse practitioner visit** |  |  |  |  |
| Number of patients, n (%) | 4 (8.89%) | 1 (4.55%) | 2 (5.41%) | 5 (11.90%) |
| Number of visits, mean ± SDa | 1.00 ± 0.00 | 5.00 ± - | 3.50 ± 2.12 | 1.20 ± 0.45 |
| **Psychologist visit** |  |  |  |  |
| Number of patients, n (%) | 7 (15.91%) | 7 (31.82%) | 6 (15.79%) | 7 (16.28%) |
| Number of visits, mean ± SDa | 2.43 ± 1.81 | 4.71 ± 4.57 | 1.50 ± 0.55 | 1.14 ± 0.38 |
| **Psychiatrist visit** |  |  |  |  |
| Number of patients, n (%) | 4 (10.00%) | 5 (22.73%) | 4 (10.26%) | 5 (11.63%) |
| Number of visits, mean ± SDa | 4.00 ± 2.31 | 7.20 ± 12.76 | 1.00 ± 0.00 | 1.20 ± 0.45 |
| **Physiotherapist visit** |  |  |  |  |
| Number of patients, n (%) | 3 (7.14%) | 9 (39.13%) | 10 (27.03%) | 6 (13.95%) |
| Number of visits, mean ± SDa | 9.33 ± 9.45 | 8.56 ± 5.96 | 2.10 ± 2.85 | 1.00 ± 0.00 |
| **Other specialist visit** |  |  |  |  |
| Number of patients, n (%) | 1 (2.56%) | 1 (5.26%) | 3 (8.82%) | 6 (14.63%) |
| Number of visits, mean ± SDa | 1.00 ± - | 2.00 ± - | 1.67 ± 1.15 | 1.00 ± 0.00 |

**Caption**: A&E = accident & emergency; CT = computed tomography; EEG = electroencephalogram; ER = emergency room; HRU = healthcare resource utilization; MRI = magnetic resonance imaging; SD = standard deviation.

a Calculated among patients with one or more visits.