Epidemiology

AstraZeneca

Asthma

US

prevalence
18.9m

diagnosed
13.9m

treated
11.8m

GINA 1
2.5m

GINA 2
1.4m

GINA 3
2.2m

GINA 4
5.2m

GINA 5
0.4m

EU5

prevalence
29.4m

diagnosed
20.4m

treated
18.6m

GINA 1
4.0m

GINA 2
2.2m

GINA 3
3.5m

GINA 4
8.3m

GINA 5
0.6m

Japan + China

prevalence
21.9m

diagnosed
16.6m

treated
10.3m

GINA 1
2.2m

GINA 2
1.2m

GINA 3
1.9m

GINA 4
4.6m

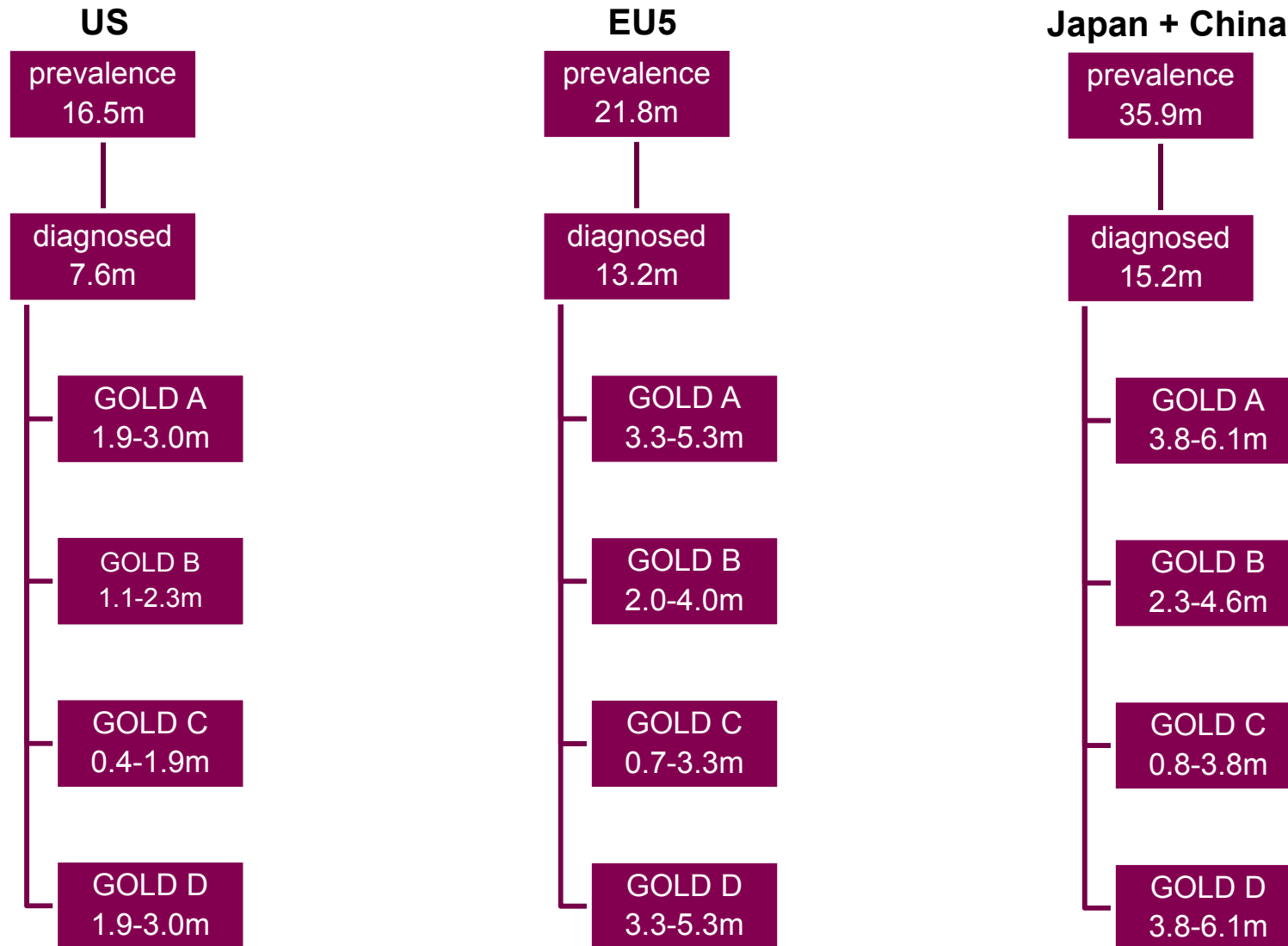| GINA 5 |
|:--|
| 0.3m |

Sources: Diagnosed and treated patients from internal analysis based on Decision Resources, ImS mIDAS and ImS longitudinal data; GOLD breakdown from internal analysis utilising Adelphi DSP patient record study 2012

COPD

US	EU5	Japan + China

US

prevalence
16.5m

diagnosed
7.6m

GOLD A
1.9-3.0m

GOLD B
1.1-2.3m

GOLD C
0.4-1.9m

GOLD D
1.9-3.0m

EU5

prevalence
21.8m

diagnosed
13.2m

GOLD A
3.3-5.3m

GOLD B
2.0-4.0m

GOLD C
0.7-3.3m

GOLD D
3.3-5.3m

Japan + China

prevalence
35.9m

diagnosed
15.2m

GOLD A
3.8-6.1m

GOLD B
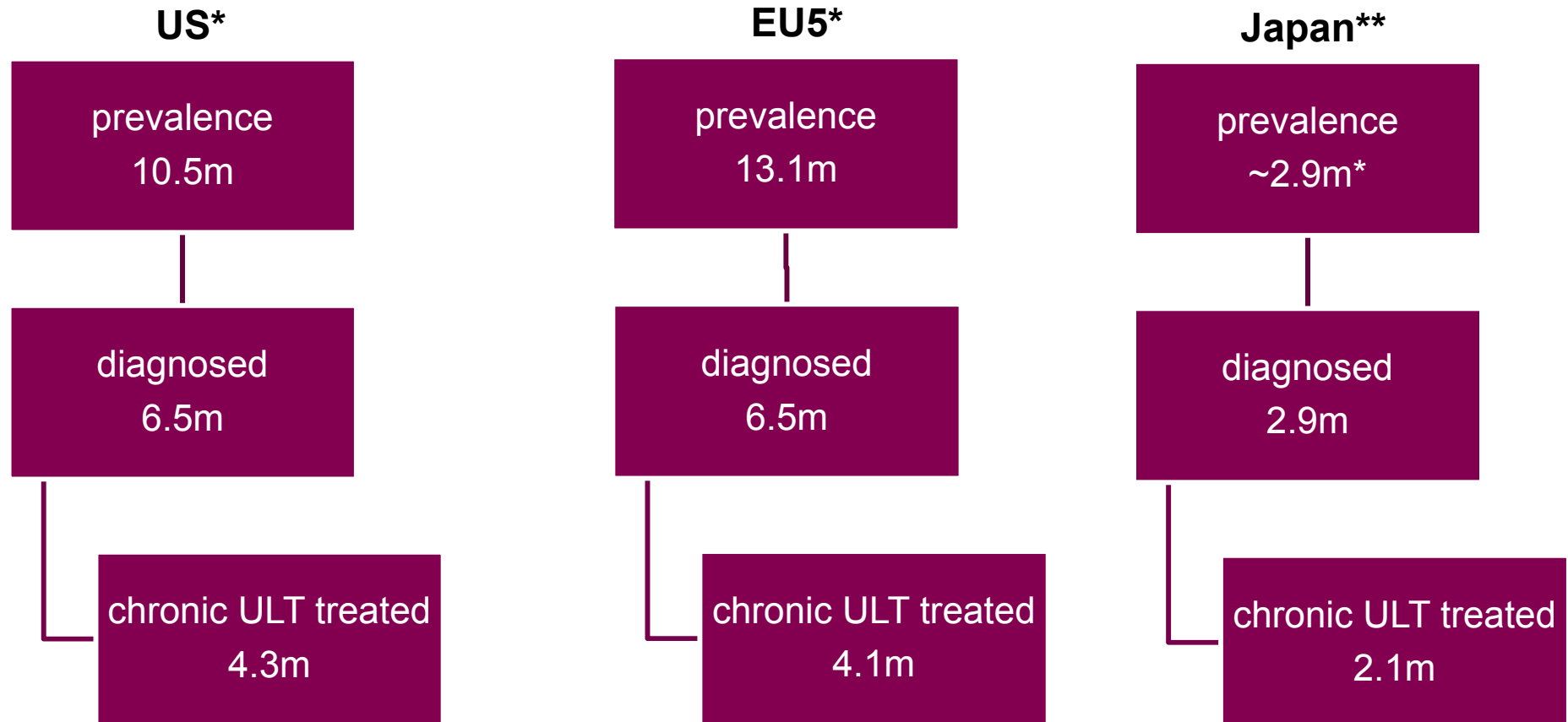2.3-4.6m

GOLD C
0.8-3.8m

GOLD D
3.8-6.1m

GOLD is a relatively recent approach to classification with some uncertainty/variation
in literature over distribution of patients

Sources: Diagnosed and treated patients from internal analysis based on Decision Resources, ImS mIDAS and ImS longitudinal data; GOLD
breakdown from internal analysis of Adelphi DSP patient record study 2012/2013, Augusti et al 2013, Boland et al 2014, Han et al 2013,
Johannessen et al 2013, Lange et al 2012, Leivseth et al 2013, Soriano et al 2013

Lesinurad
Gout

US*

prevalence 10.5m

diagnosed 6.5m

chronic ULT treated 4.3m

EU5*

prevalence 13.1m

diagnosed 6.5m

chronic ULT treated 4.1m

Japan**

prevalence ~2.9m*

diagnosed 2.9m

chronic ULT treated 2.1m

ULT: Urate Lowering Therapy

Due to hyperuricemia treatment, overall gout prevalence remains similar to diagnosed gout prevalence

Sources: * Decision Resources; NHANES (2009-2010); Stevens et al. Population Health Metrics 2012,10:22; http://www.ncbi.nlm.nih.gov/pubmed/22778033;
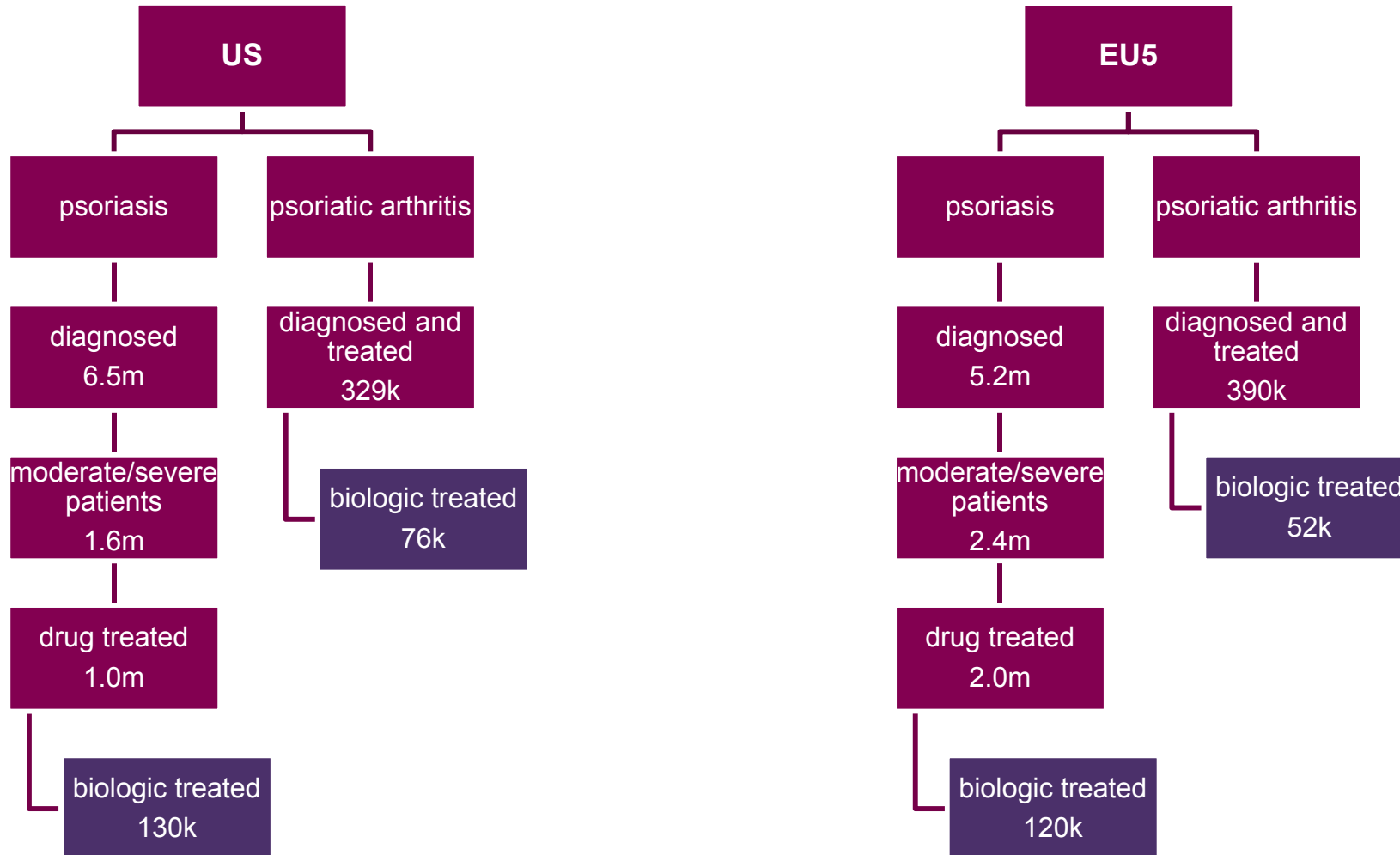AZ Internal Analysis; IMS MIDAS Volume Reconciliation
**Decision Resources; Kamatani N et. Al., 2011; Zairoric et al 2007; IMS MIDAS Volume Reconciliation; AZ Internal Analysis

Brodalumab
Psoriasis (PsO) and Psoriatic Arthritis (PsA)

US

- psoriasis
  - diagnosed
    6.5m
    - moderate/severe patients
      1.6m
      - drug treated
        1.0m
        - biologic treated
          130k
- psoriatic arthritis
  - diagnosed and treated
    329k
    - biologic treated
      76k

EU5

- psoriasis
  - diagnosed
    5.2m
    - moderate/severe patients
      2.4m
      - drug treated
        2.0m
        - biologic treated
          120k
- psoriatic arthritis
  - diagnosed and treated
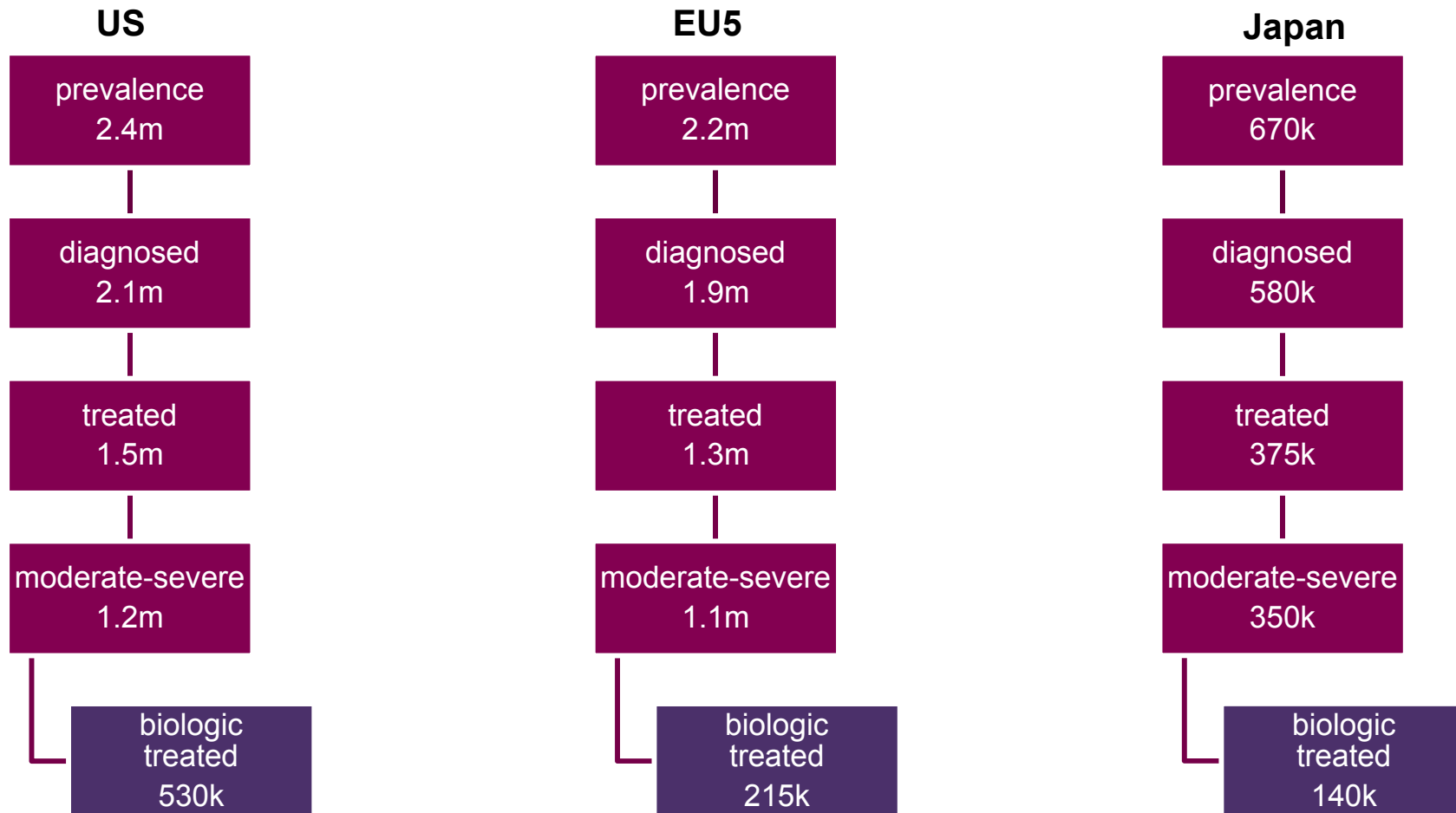   390k
    - biologic treated
      52k

Sources: Decision Resources (2013), ImS Patient Level data (2013), ImS mDART (2014), Adelphi Psoriasis DSP (2013), AZ Internal analysis

Mavrilimumab
Rheumatoid arthritis (RA)

US

| prevalence 2.4m |
| diagnosed 2.1m |
| treated 1.5m |
| moderate-severe 1.2m |
| biologic treated 530k |

EU5

| prevalence 2.2m |
| diagnosed 1.9m |
| treated 1.3m |
| moderate-severe 1.1m |
| biologic treated 215k |

Japan

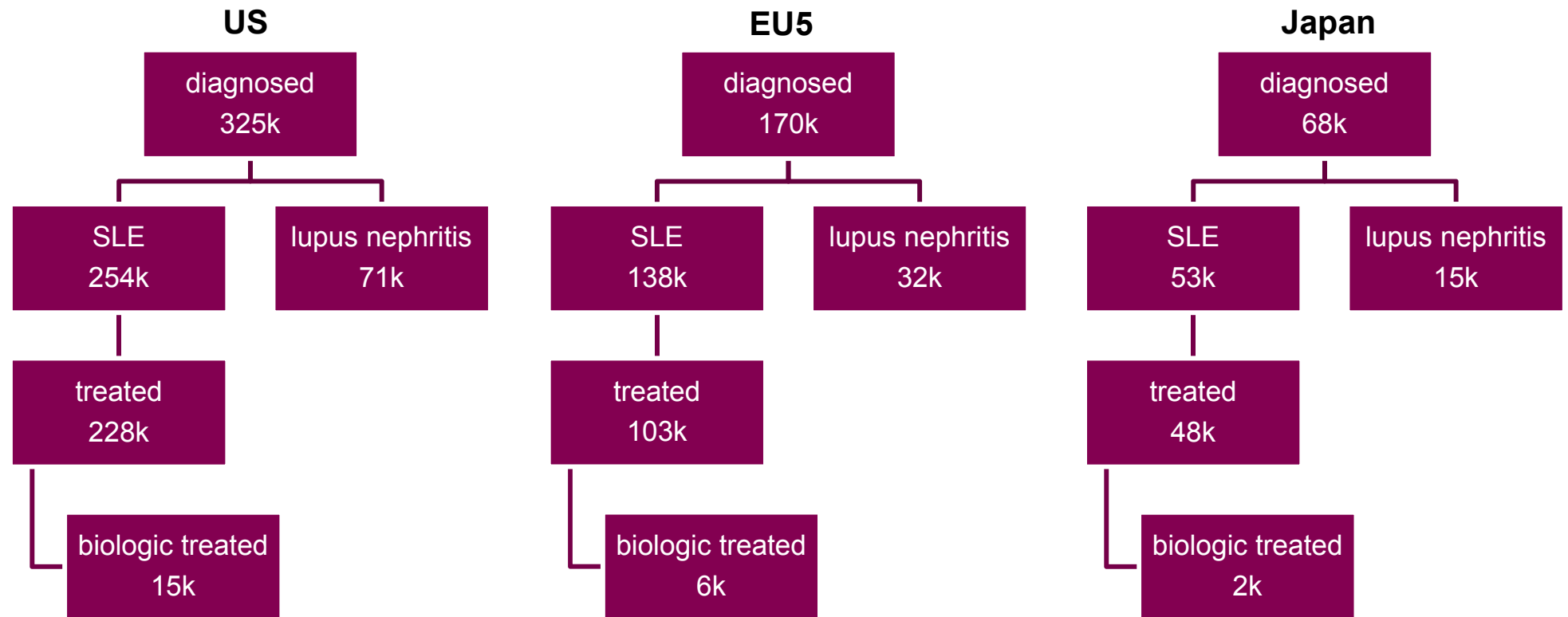| prevalence 670k |
| diagnosed 580k |
| treated 375k |
| moderate-severe 350k |
| biologic treated 140k |

Sources: Decision Resources (2013), kantar Health (2014), ImS mDART (Volume, medical data), Adelphi Rheumatoid Arthritis DSP EU5 (2014), AZ internal analysis
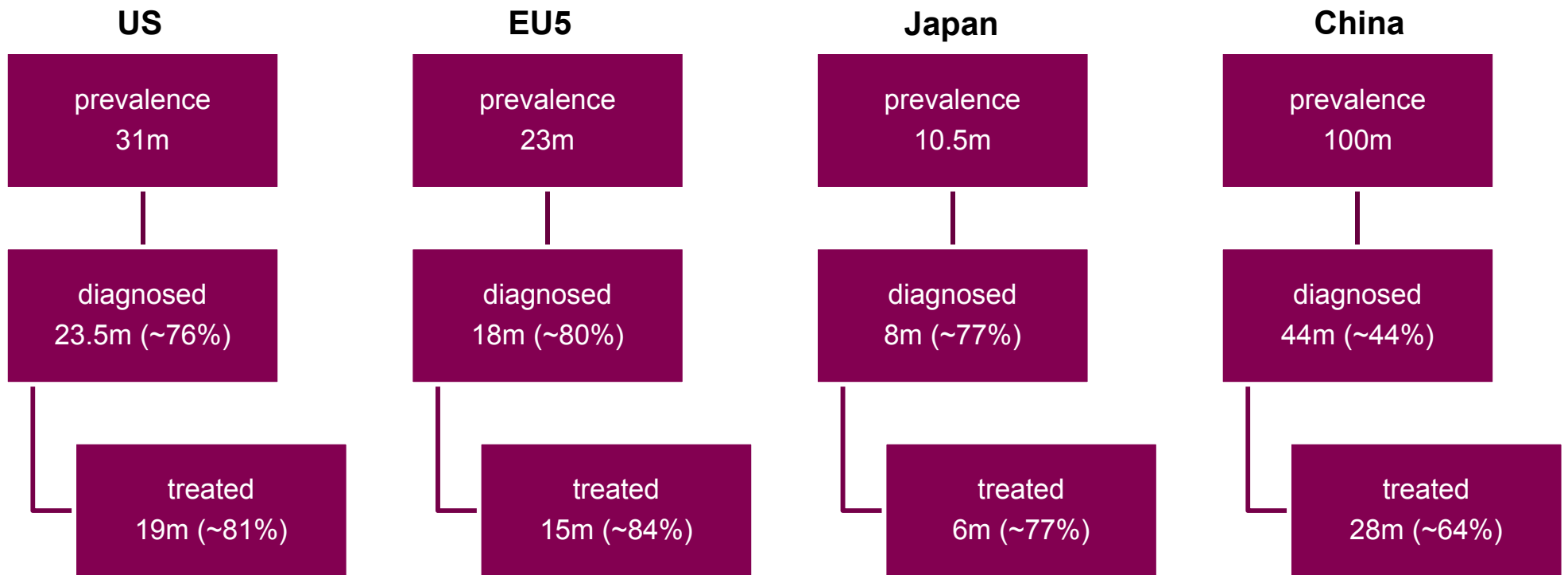
Sifalimumab and anifrolumab
Lupus

US

```
diagnosed
325k
├── SLE          lupus nephritis
    254k         71k
    └── treated
        228k
        └── biologic treated
            15k
```

EU5

```
diagnosed
170k
├── SLE          lupus nephritis
    138k         32k
    └── treated
        103k
        └── biologic treated
            6k
```

Japan

```
diagnosed
68k
├── SLE          lupus nephritis
    53k          15k
    └── treated
        48k
        └── biologic treated
            2k
```

SLE: Systemic Lupus Erythematosus
Source: Decision Resources, Datamonitor, kantar Health

Type 2 Diabetes

US

prevalence 31m

diagnosed 23.5m (~76%)

treated 19m (~81%)

EU5

prevalence 23m

diagnosed 18m (~80%)

treated 15m (~84%)

Japan

prevalence 10.5m

diagnosed 8m (~77%)

treated 6m (~77%)

China

prevalence 100m

diagnosed 44m (~44%)

treated 28m (~64%)

Source: Decision Resources Sept 2014

Brilinta
ACS, prior MI, stroke

PLATO study*

ACS prevalence
4.0m

STEMI
1.2m

NSTEMI
1.5m

unstable
angina
1.4m

P2Y12 treated
930k

P2Y12 treated
1.1m

P2Y12 treated
900k

**PEGASUS
study***

prior MI
13-36 months
4.5m

P2Y12 treated
950k

ASA treated /
no therapy
3.6m

SOCRATES study**

ischemic stroke
prevalence
2.2m

mild
1.2m

moderate / severe
990k

TIA incidence
480k

high risk
340k

other
140k
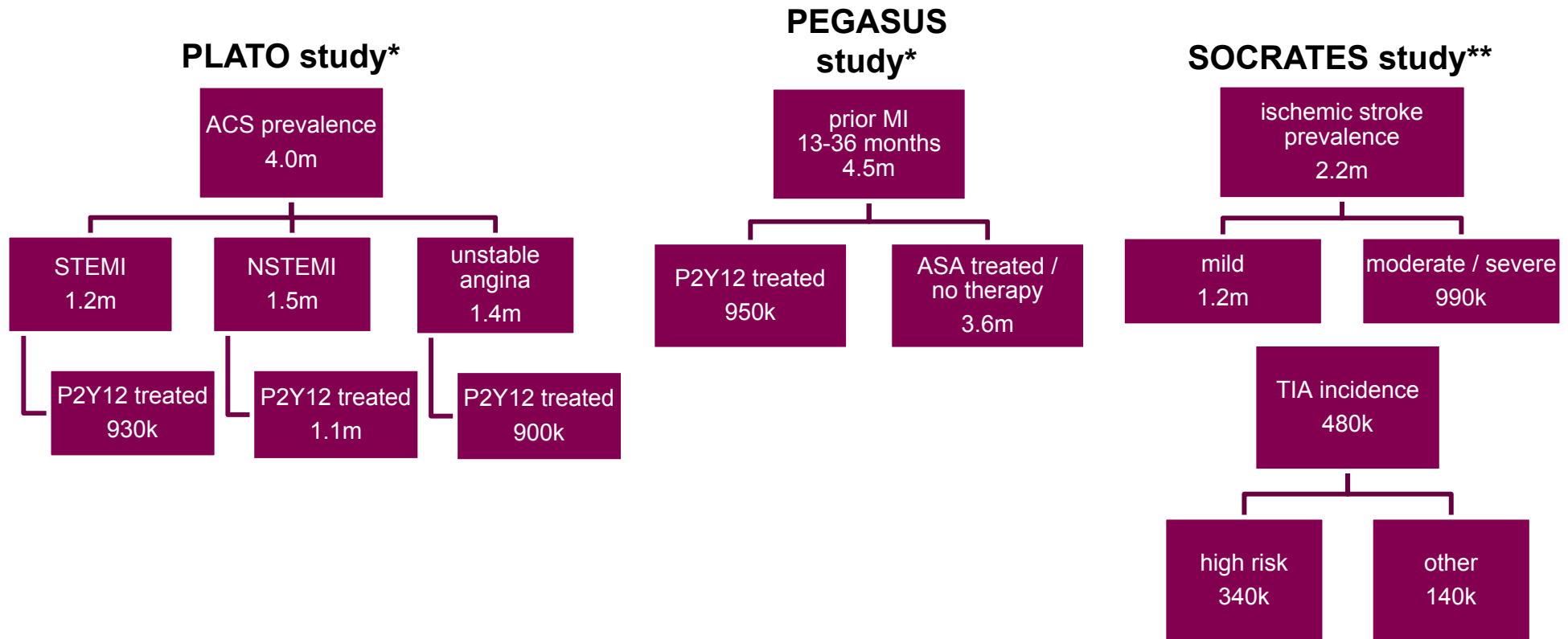
ACS: Acute Coronary Syndrome
MI: myocardial Infarction
TIA: Transient Ischemic Attack
STEMI: ST Segment Elevation myocardial Infarction
NSTEMI: Non-ST Segment Elevation myocardial Infarction
ASA: Aspirin
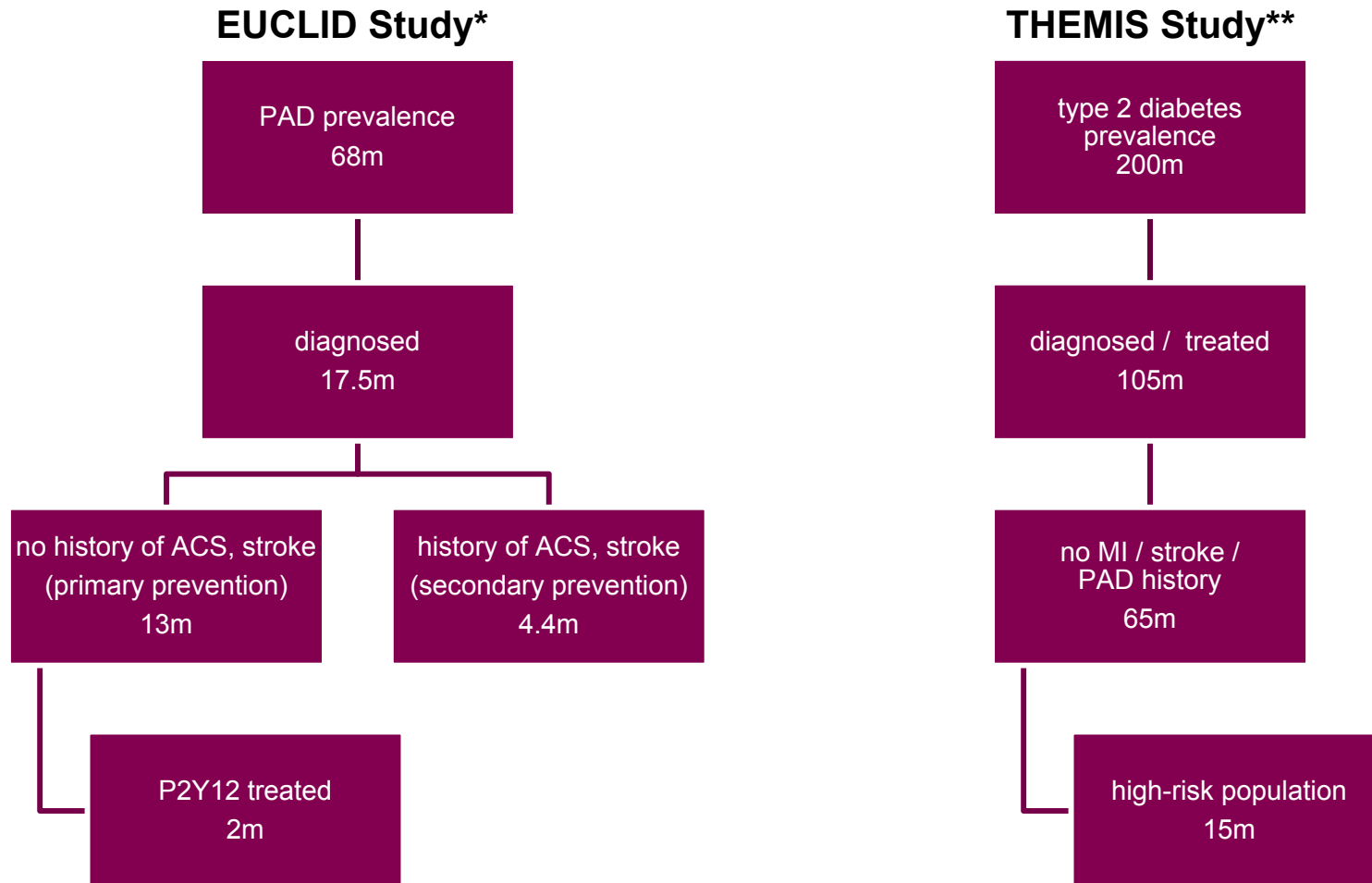*: US, EU5, Australia, China, Russia, & Japan markets only
**: US, EU5, China, & Japan markets only
Source: kantar Health (2010), GRACE Registry (2007), National Health & Wellness Survey (2013), medical Literature, Internal Data

Brilinta (continued)
PAD, Type 2 Diabetes

EUCLID Study*

PAD prevalence
68m

diagnosed
17.5m

no history of ACS, stroke
(primary prevention)
13m

history of ACS, stroke
(secondary prevention)
4.4m

P2Y12 treated
2m

THEMIS Study**

type 2 diabetes
prevalence
200m

diagnosed / treated
105m

no MI / stroke /
PAD history
65m

high-risk population
15m

PAD: Peripheral Artery Disease
*: US, EU5, China, & Brazil markets only
**: All global markets
Source: Decision Resources (2010 & 2013), kantar Health (2010), NHANES Database (2010), Framingham
Heart Study (1997), medical Literature, &Internal Data

10 - Epidemiology

Epanova
Hypertriglyceridemia

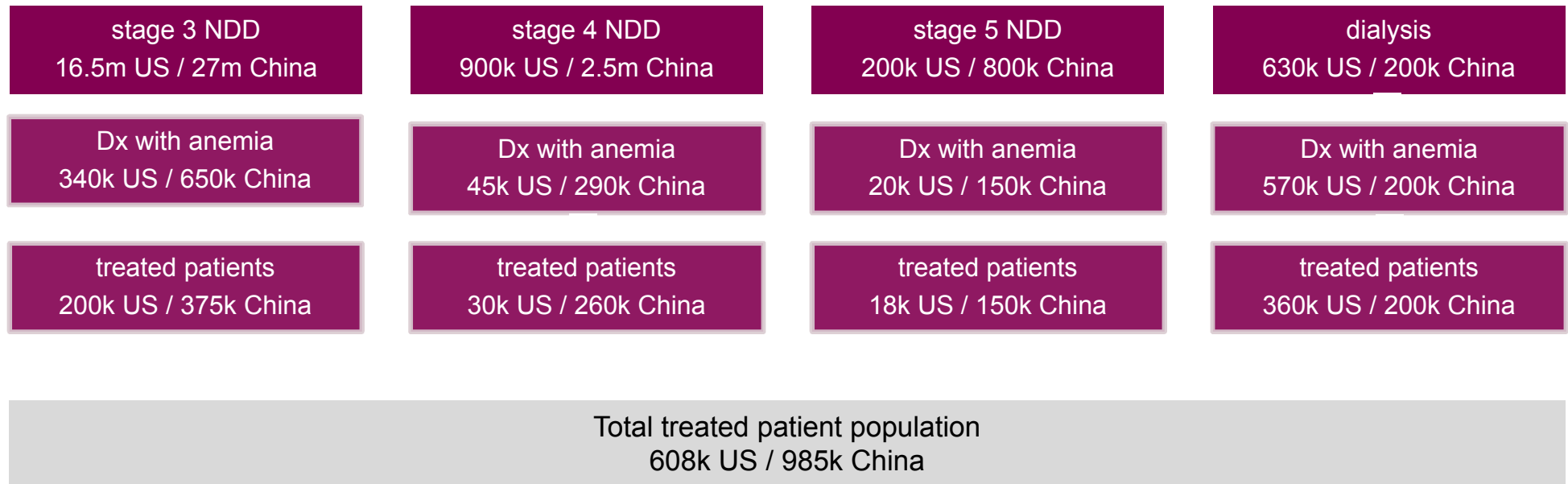| US	EU5	Japan
prevalence 315m	prevalence 315m	prevalence 128m
HTG (>150 mg/dL) 64m	HTG (>150 mg/dL) 67m	HTG (>150 mg/dL) 31m
HTG (>150 mg/dL) diagnosed & treated 15m	HTG (>150 mg/dL) diagnosed & treated 14m	HTG (>150 mg/dL) diagnosed & treated 6.5m
patients on TG specific lowering therapy (fibrates & Om3) 6.5m	patients on TG specific lowering therapy (fibrates & Om3) 4m	patients on TG specific lowering therapy (fibrates & Om3) 4m

HTG: Hypertriglyceridemia
TG: Triglycerides
Source: Decision Resources, kantar Health

Roxadustat*
Chronic kidney disease - NDD and DD

stage 3 NDD	stage 4 NDD	stage 5 NDD	dialysis
16.5m US / 27m China	900k US / 2.5m China	200k US / 800k China	630k US / 200k China

Dx with anemia	Dx with anemia	Dx with anemia	Dx with anemia
340k US / 650k China	45k US / 290k China	20k US / 150k China	570k US / 200k China

treated patients	treated patients	treated patients	treated patients
200k US / 375k China	30k US / 260k China	18k US / 150k China	360k US / 200k China

Total treated patient population
608k US / 985k China

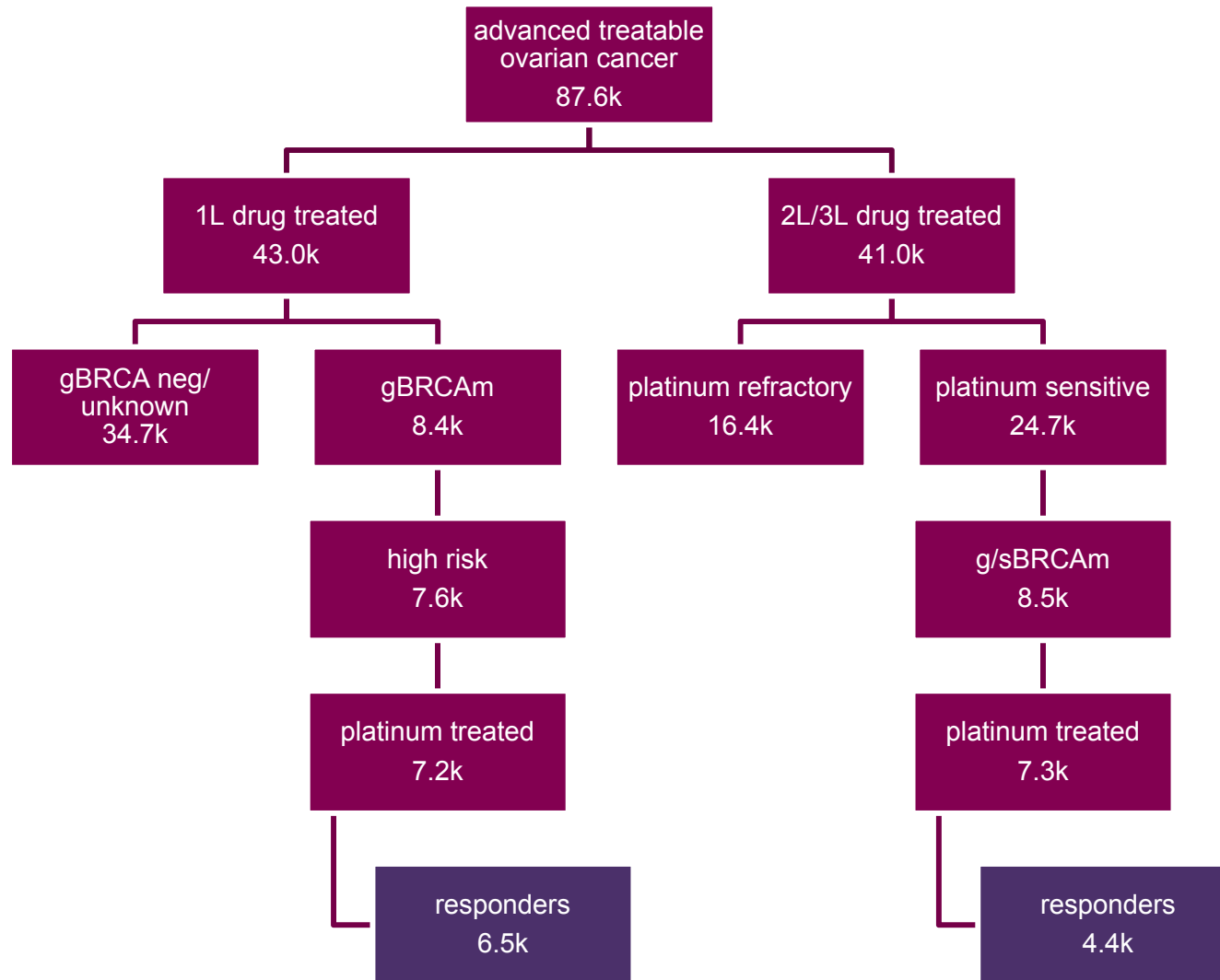NDD: Non-Dialysis Dependent
DD: Dialysis Dependent
* AstraZeneca holds marketing rights in the U.S. and China.
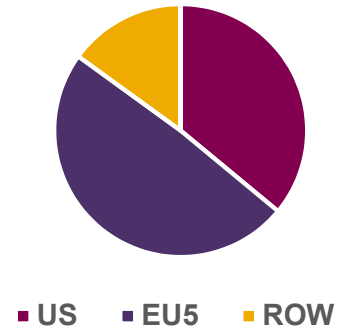Source: Decision Resources; internal estimates

Lynparza
Ovarian cancer

```
                    advanced treatable
                      ovarian cancer
                          87.6k
            ┌──────────────────┴──────────────────┐
      1L drug treated                        2L/3L drug treated
          43.0k                                   41.0k
      ┌──────┴──────┐                         ┌──────┴──────┐
 gBRCA neg/        gBRCAm              platinum refractory   platinum sensitive
  unknown           8.4k                     16.4k               24.7k
   34.7k             │                                             │
              ┌──────┴                                      ┌──────┴
           high risk                                      g/sBRCAm
             7.6k                                           8.5k
              │                                              │
         platinum treated                            platinum treated
             7.2k                                         7.3k
              │                                            │
         ┌────┴                                       ┌────┴
      responders                                   responders
        6.5k                                          4.4k
```

Geographic breakdown

■ US   ■ EU5   ■ ROW

Source: Epi: kantar Health Patient metrics (2014), AZ internal data
Definitions: Drug treatable populations include incident patients with metastatic disease, plus patients who have recurred from early stage disease.
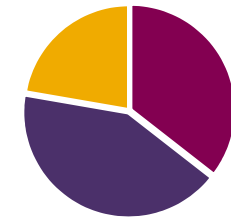Drug treated populations include only those patients who are currently treated with a systemic therapy.
Mutation: BRCA status reflects the total number of patients who are BRCAm, and does not account for diagnostic testing rates.
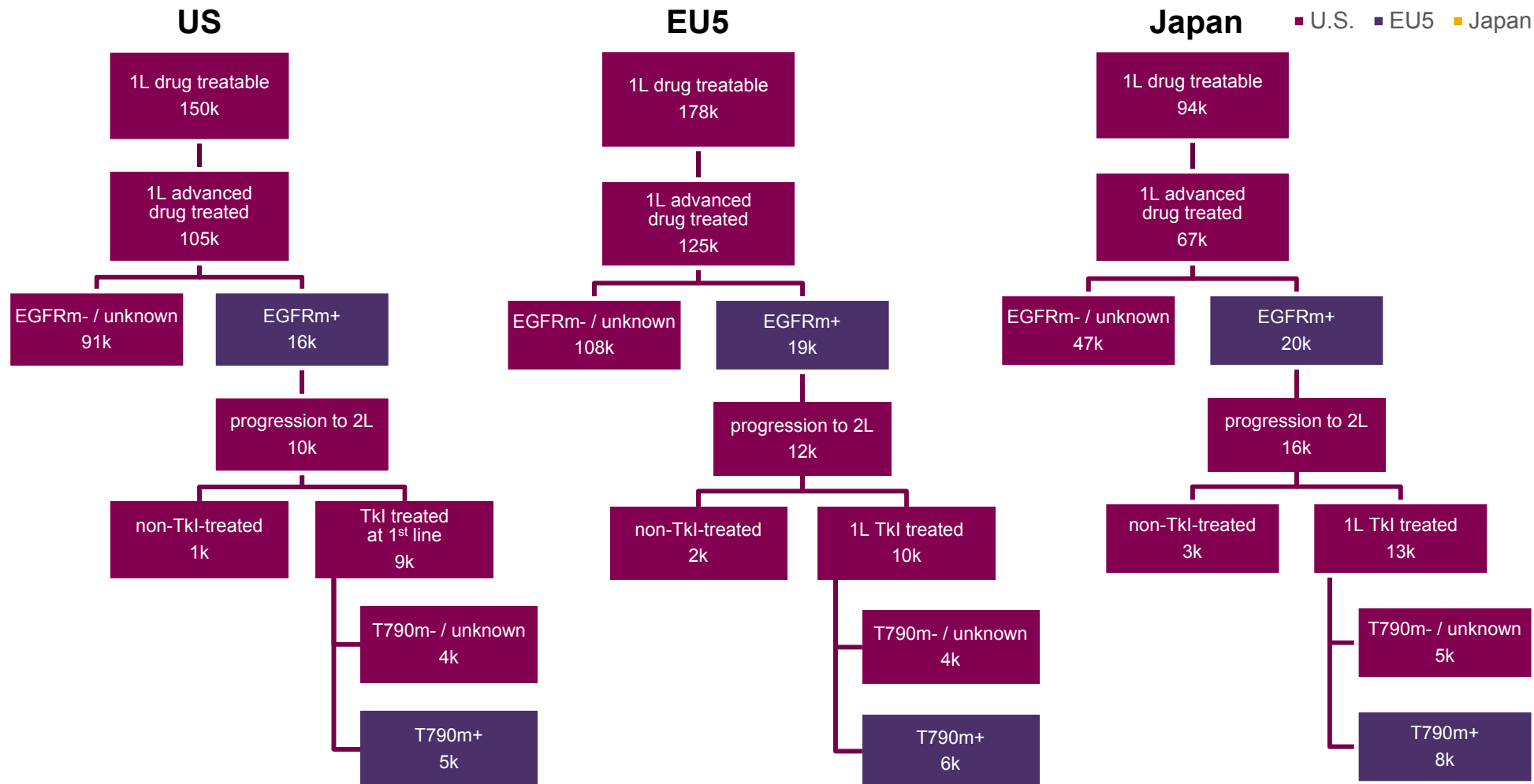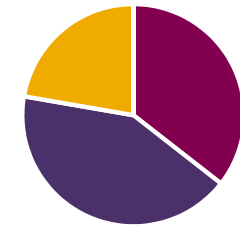
AZD9291
EGFRm+ non-small cell lung cancer (NSCLC)

Geographic breakdown

■ U.S.   ■ EU5   ■ Japan

US

| 1L drug treatable 150k |
| 1L advanced drug treated 105k |

EGFRm- / unknown 91k | EGFRm+ 16k

progression to 2L 10k

non-TkI-treated 1k | TkI treated at 1st line 9k

T790m- / unknown 4k

T790m+ 5k

EU5

| 1L drug treatable 178k |
| 1L advanced drug treated 125k |

EGFRm- / unknown 108k | EGFRm+ 19k

progression to 2L 12k

non-TkI-treated 2k | 1L TkI treated 10k

T790m- / unknown 4k

T790m+ 6k

Japan

| 1L drug treatable 94k |
| 1L advanced drug treated 67k |

EGFRm- / unknown 47k | EGFRm+ 20k

progression to 2L 16k

non-TkI-treated 3k | 1L TkI treated 13k

T790m- / unknown 5k

T790m+ 8k

Based on 2014 patient numbers, treatment rates, and progression rates to second line
Sources: kantar; Decision Resource, internal data
Definitions: Drug treatable populations include incident patients with metastatic disease, plus patients who have recurred from early stage disease. Drug treated populations include only those patients who are currently treated with a systemic therapy.
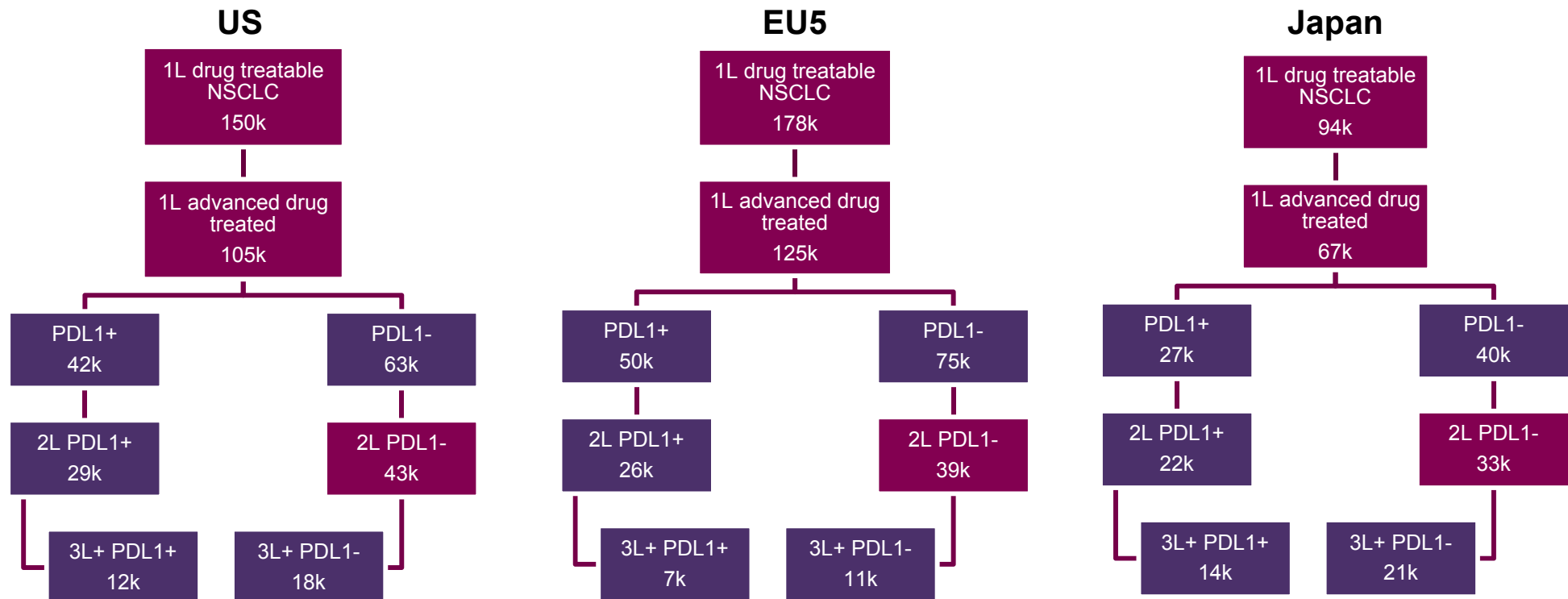
MEDI4736 / MEDI4736 + tremelimumab
Non-small cell lung cancer (NSCLC)

Geographic breakdown

■ U.S. ■ EU5 ■ Japan

US

| 1L drug treatable NSCLC |
| 150k |

| 1L advanced drug treated |
| 105k |

| PDL1+ 42k | | PDL1- 63k |

| 2L PDL1+ 29k | | 2L PDL1- 43k |

| 3L+ PDL1+ 12k | | 3L+ PDL1- 18k |

EU5

| 1L drug treatable NSCLC |
| 178k |

| 1L advanced drug treated |
| 125k |

| PDL1+ 50k | | PDL1- 75k |

| 2L PDL1+ 26k | | 2L PDL1- 39k |

| 3L+ PDL1+ 7k | | 3L+ PDL1- 11k |

Japan

| 1L drug treatable NSCLC |
| 94k |

| 1L advanced drug treated |
| 67k |

| PDL1+ 27k | | PDL1- 40k |

| 2L PDL1+ 22k | | 2L PDL1- 33k |

| 3L+ PDL1+ 14k | | 3L+ PDL1- 21k |

Based on 2014 patient numbers, treatment rates, and progression rates to second and third line
Sources: kantar; Decision Resource, internal data
Definitions: Drug treatable populations include incident patients with metastatic disease, plus patients who have recurred from early stage disease. Drug treated populations include only those patients who are currently treated with a systemic therapy.
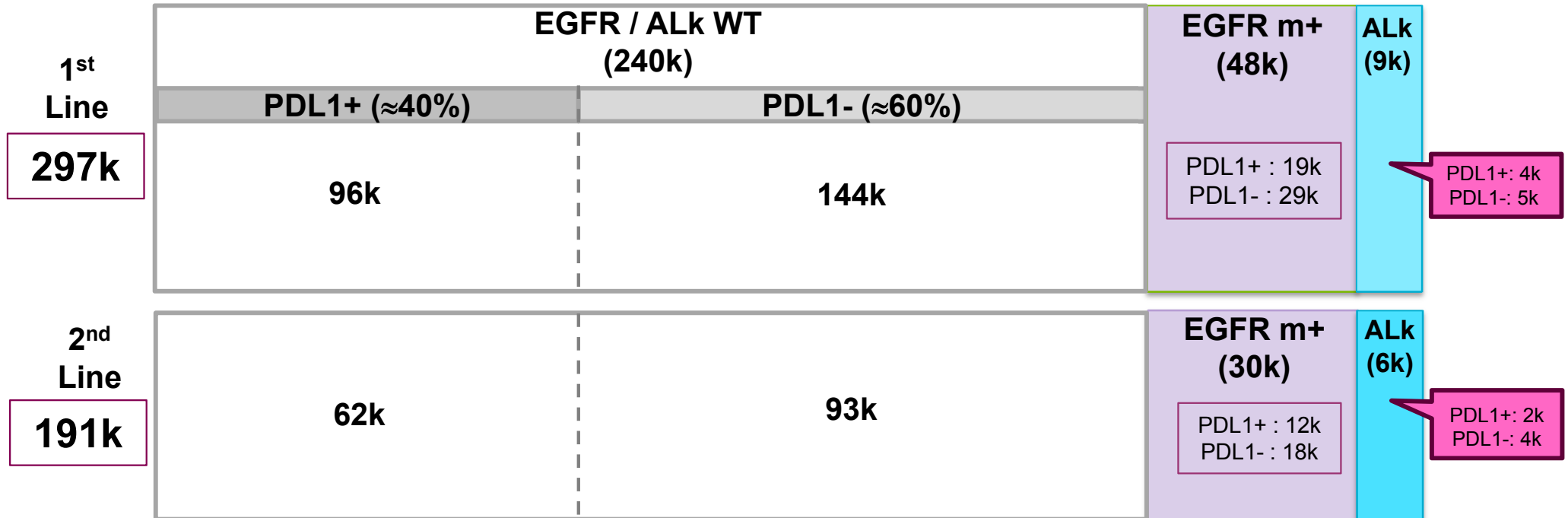PDL1+ reflects the total number of patients who are PDL1+, and does not account for diagnostic testing rates. PDL1 prevalence subject to change based on evolving diagnostic science.

Target patient population for mono or combo

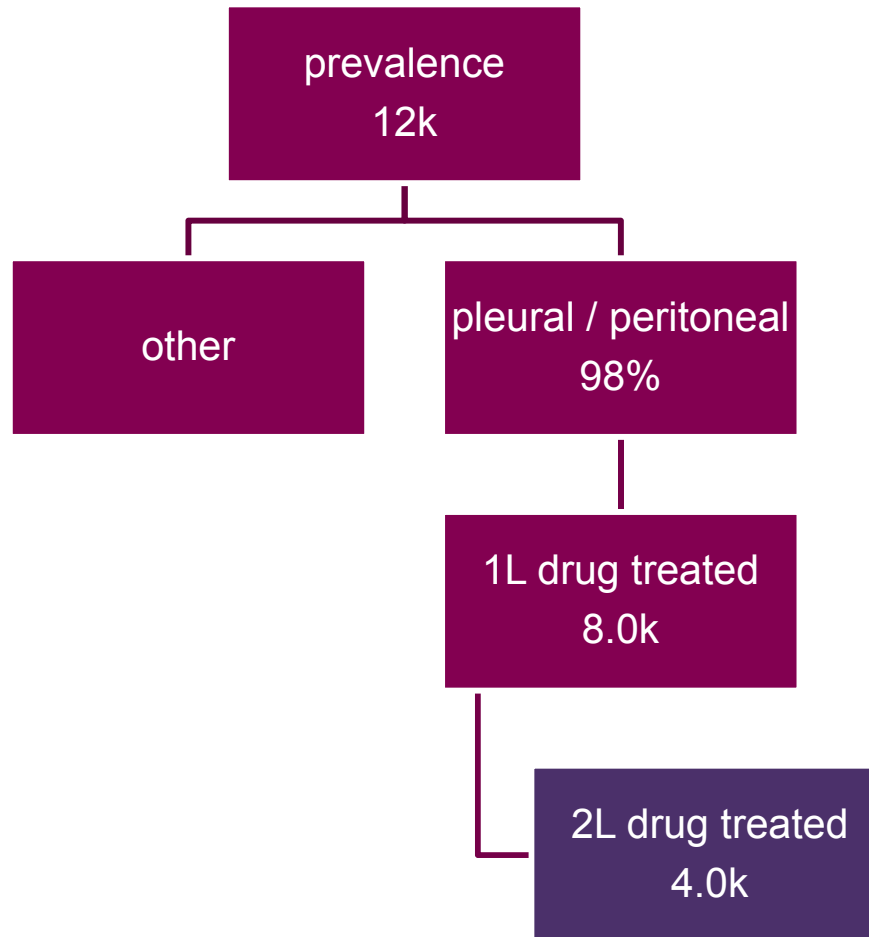# Metastatic NSCLC
Drug-treated patients

1st Line

297k

EGFR / ALk WT (240k)		EGFR m+ (48k)	ALk (9k)
PDL1+ (≈40%)	PDL1- (≈60%)		
96k	144k	PDL1+ : 19k PDL1- : 29k	PDL1+: 4k PDL1-: 5k

2nd Line

191k

EGFR / ALk WT		EGFR m+ (30k)	ALk (6k)
62k	93k	PDL1+ : 12k PDL1- : 18k	PDL1+: 2k PDL1-: 4k

Based on 2014 drug treated patient numbers, treatment rates, and progression rates to second
Assumes PDL1 prevalence is consistent across EGFR+, ALk+, and EGFR/ALk-; PDL1 prevalence subject to change based on evolving diagnostic science.
Source: kantar/Decision Resources/market Consults, internal data
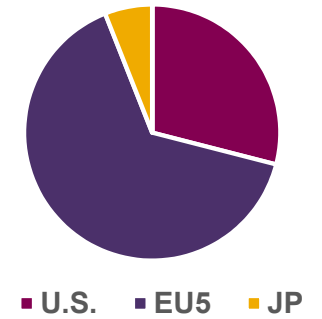Numbers may not add up exact due to rounding

Tremelimumab
Mesothelioma

```
                    ┌─────────────────┐
                    │   prevalence    │
                    │      12k        │
                    └─────────────────┘
                             │
              ┌──────────────┴──────────────┐
    ┌─────────────────┐          ┌─────────────────┐
    │     other       │          │ pleural /       │
    │                 │          │ peritoneal      │
    │                 │          │     98%         │
    └─────────────────┘          └─────────────────┘
                                          │
                                 ┌─────────────────┐
                                 │ 1L drug treated │
                                 │      8.0k       │
                                 └─────────────────┘
                                          │
                                 ┌─────────────────┐
                                 │ 2L drug treated │
                                 │      4.0k       │
                                 └─────────────────┘
```

Geographic breakdown
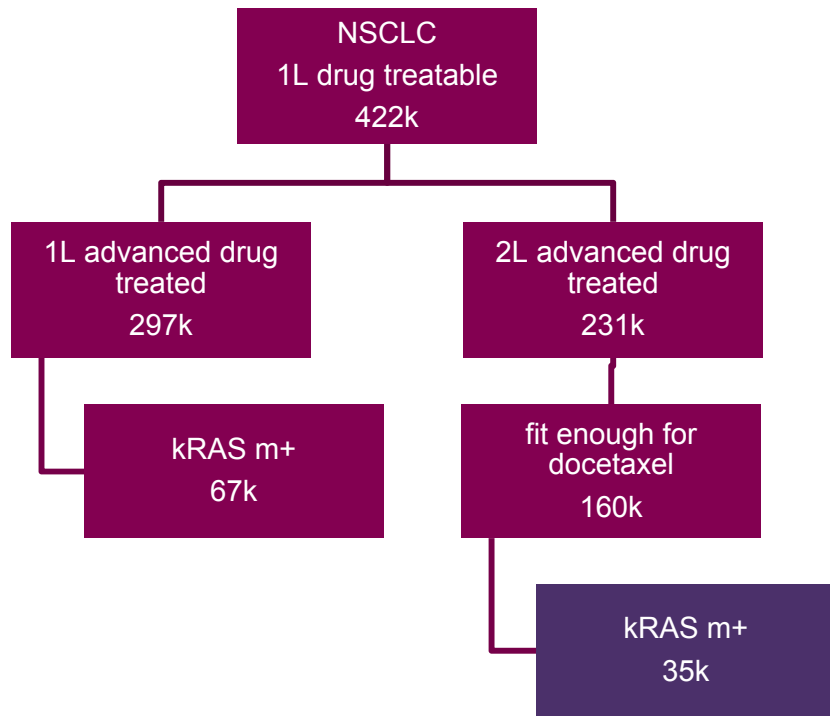
- U.S. ■ EU5 ■ JP

Source: SEER/IARC; market research
Based on 2014 patient numbers and treatment rates

Selumetinib

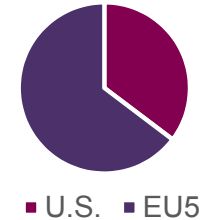## NSCLC, differentiated thyroid cancer (DTC), uveal melanoma (UM)
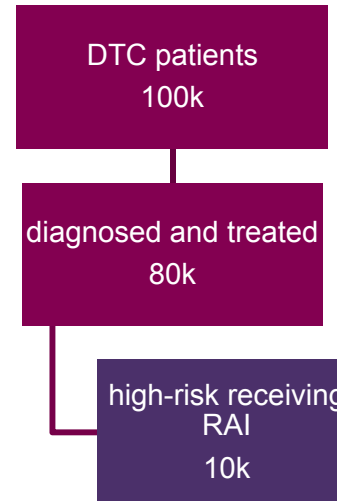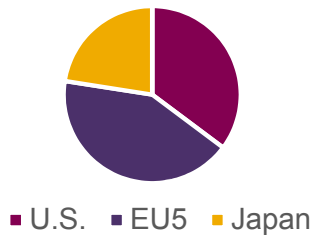
NSCLC 1L drug treatable 422k

- **1L advanced drug treated** 297k
  - **kRAS m+** 67k
- **2L advanced drug treated** 231k
  - **fit enough for docetaxel** 160k
    - **kRAS m+** 35k

DTC patients 100k

- **diagnosed and treated** 80k
  - **high-risk receiving RAI** 10k

UM patients 5k

- **diagnosed and treated 1L** 2k
- **diagnosed and treated 2L** 1k

Geographic breakdown — ■ U.S. ■ EU5 ■ Japan

Geographic breakdown — ■ U.S. ■ EU5

Geographic breakdown — ■ U.S. ■ EU5

Based on 2014 patient numbers, treatment rates, and progression rates to second line
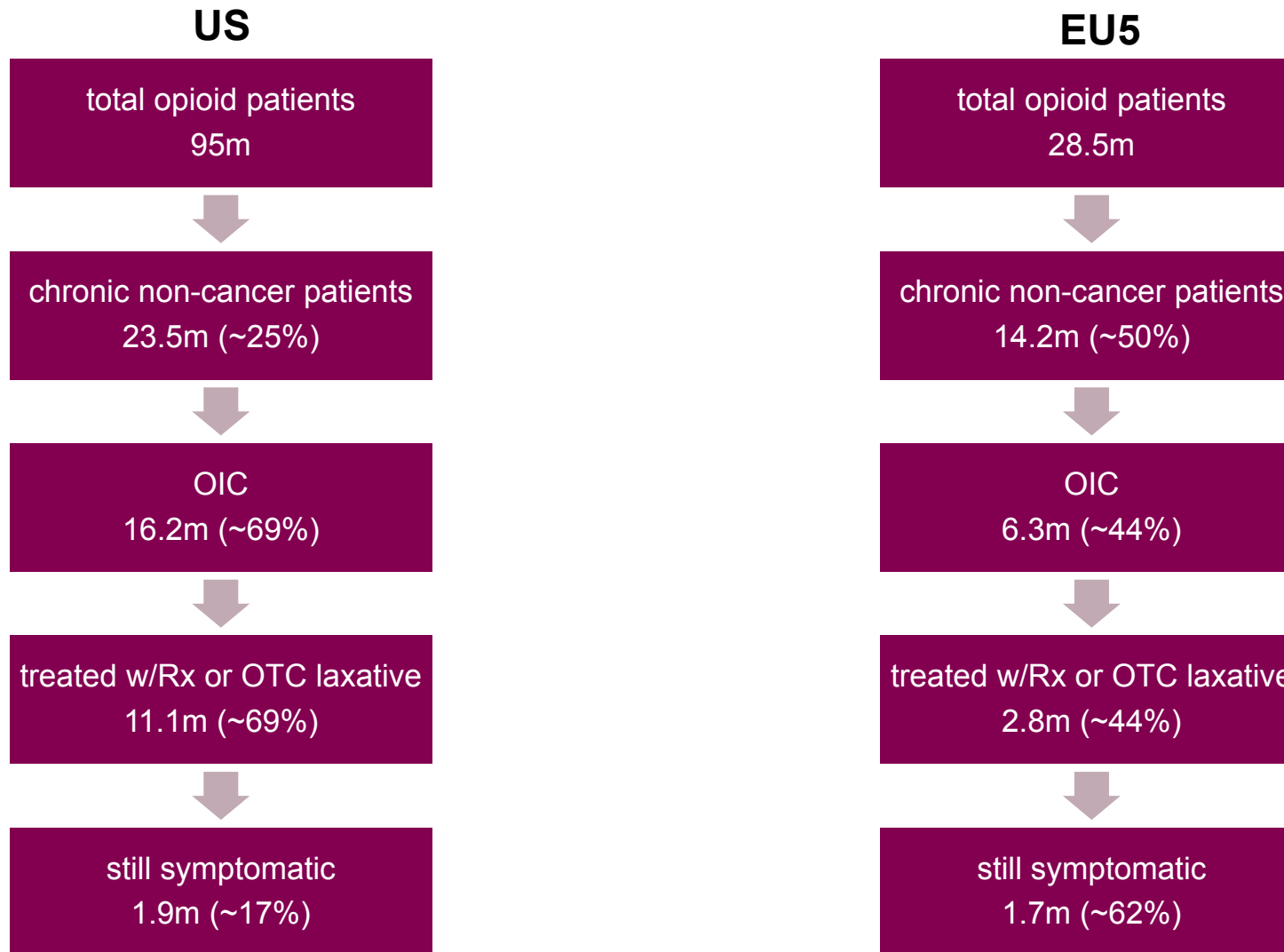Sources: kantar; Decision Resource, internal data, AZ Epidemiology Group
Definitions: Drug treatable populations include incident patients with metastatic disease, plus patients who have recurred from early stage disease.
Drug treated populations include only those patients who are currently treated with a systemic therapy.

Movantik / Moventig
Opioid-induced constipation (OIC)

US

total opioid patients
95m

↓

chronic non-cancer patients
23.5m (~25%)

↓

OIC
16.2m (~69%)

↓

treated w/Rx or OTC laxative
11.1m (~69%)

↓

still symptomatic
1.9m (~17%)

EU5

total opioid patients
28.5m

↓

chronic non-cancer patients
14.2m (~50%)

↓

OIC
6.3m (~44%)

↓

treated w/Rx or OTC laxative
2.8m (~44%)

↓

still symptomatic
1.7m (~62%)

Patients are based on a calculated "incidence' number of opioid users.
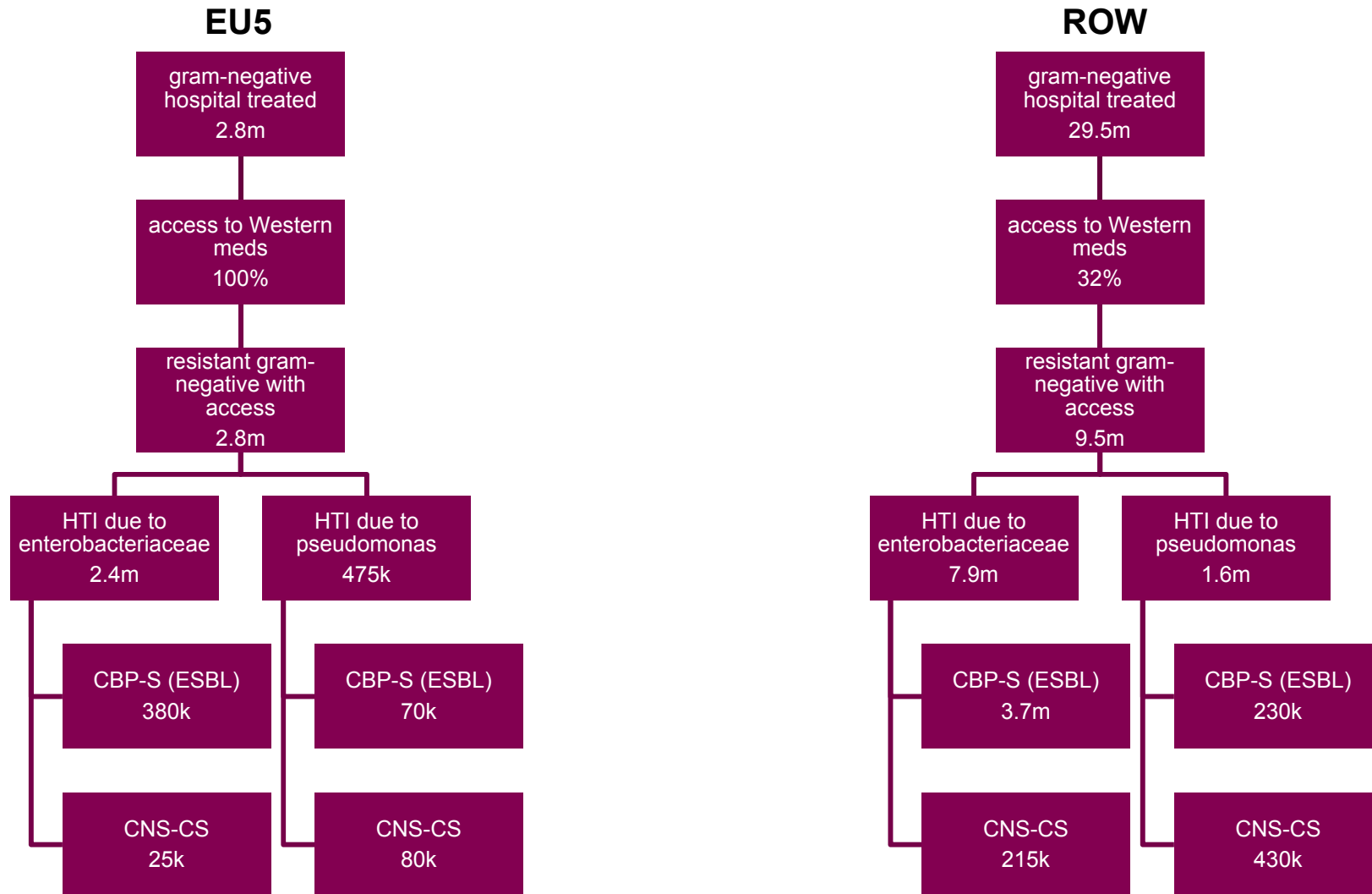Note: Rounding in percentages not adjusted
Sources: US ImS APLD, SmI Alcott, Disruptyx Analogue; EU: ImS; Other: mC Inputs, medical Publications

CAZ AVI
Serious gram-negative bacterial infection

EU5

```
gram-negative
hospital treated
2.8m
        │
access to Western
meds
100%
        │
resistant gram-
negative with
access
2.8m
        │
   ┌────┴────┐
HTI due to        HTI due to
enterobacteriaceae   pseudomonas
2.4m               475k
   │                  │
CBP-S (ESBL)      CBP-S (ESBL)
380k              70k
   │                  │
CNS-CS            CNS-CS
25k               80k
```

ROW

```
gram-negative
hospital treated
29.5m
        │
access to Western
meds
32%
        │
resistant gram-
negative with
access
9.5m
        │
   ┌────┴────┐
HTI due to        HTI due to
enterobacteriaceae   pseudomonas
7.9m               1.6m
   │                  │
CBP-S (ESBL)      CBP-S (ESBL)
3.7m              230k
   │                  │
CNS-CS            CNS-CS
215k              430k
```

Patient numbers are in 000s
Sources: Decision Resources; Surveillance Data Link Network (SDLN by IHmA Inc); Internal AstraZeneca assumptions
*ROW: Uplift factor applied to Russia, China, Brazil, mexico data to generate ROW (Excludes North America)

Epidemiology

AstraZeneca