Appendix

Potential target patient populations 2020
Oncology

Hemophilia A

Ophthalmology

Infectious diseases

Neuroscience

Immunology
Herceptin + Perjeta, Tecentriq: HER2+ early Breast Cancer (eBC)

Source: Roche/Genentech
Perjeta, Herceptin, Kadcyla, Tecentriq: HER2+ metastatic Breast Cancer (mBC)

- The target US and EU 5 population for 1L HER2+ mBC is ~19,500 patients (7,700 de novo and 11,800 adjuvant relapse)
- The target US and EU 5 population for 2L–4L HER2+ mBC is ~28,200 patients (~11,400 US/~16,800 Top 5 EU)

Source: Roche/Genentech; Kadcyla in collaboration with ImmunoGen
Ipatasertib, SERD (RG6171, GDC-9545): HER2-/HR+ 1L and recurrent mBC

Source: Roche/Genentech; *2/3L includes HR+ patients who received chemotherapy in 1L; Patients may receive up to 7 lines of treatment, but 4L+ patients are not included; Ipatasertib in collaboration with Array BioPharma
Tecentriq, ipatasertib: 
*Triple Negative Breast Cancer (TNBC)*

Source: Roche/Genentech; Ipatasertib in collaboration with Array BioPharma
Avastin: Ovarian Cancer (OC)

2020 estimates for number of patients

OC advanced stage incidence

1L chemo-treated

2L chemo-treated plat sensitive

2L chemo-treated plat resistant

~89.9k

~33k

~11.8k

Source: Roche/Genentech
Tecentriq: Adjuvant squamous cell carcinoma of the head and neck (SCCHN)

- 2020 estimates for number of patients:
  - Total SCCHN incident patients: 71.7 thousands
  - Early stage patients: 47.6
    - EU5: 62.0
    - US: 29.8
    - China (urban+rural): 21.4
  - Locally advanced stage patients: 40.5
    - EU5: 37.6
    - US: 27.7
    - China (urban+rural): 18.2
  - Metastatic stage patients: 2.1
    - EU5: 1.4
    - US: 9.9
    - China (urban+rural): 9.4
  - Surgery only: 3.1
    - EU5: 1.8
    - US: 9.9
    - China (urban+rural): 7.2
  - Surgery+Adjuvant: 4.5
    - EU5: 9.4
    - US: 11.1
    - China (urban+rural): 9.9

Source: Roche/Genentech
Tecentriq, Avastin, tiragolumab: Non Squamous Non Small Cell Lung Cancer (NSq NSCLC)

Source: Roche/Genentech
Rozlytrek (ROS1+) and Gavreto (RET+):
ROS1+ or RET+ metastatic non-small cell lung cancer (mNSCLC)
### Alecensa: ALK+ metastatic Non Small Cell Lung Cancer (mNSCLC)

#### Source: Roche/Genentech; Alecensa in collaboration with Chugai

<table>
<thead>
<tr>
<th>Incidence</th>
<th>Drug Treated</th>
<th>EU5</th>
<th>US</th>
<th>China (urban+rural)</th>
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<tr>
<td>20.8</td>
<td>4.8</td>
<td>14.9</td>
<td>5.6</td>
<td>~13.8</td>
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<tr>
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<td>2.9</td>
<td>2.0</td>
<td>2.4</td>
<td>~6.9</td>
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<td>5.6</td>
<td>9.4</td>
<td>2.4</td>
<td></td>
</tr>
</tbody>
</table>

2020 estimates for number of patients (thousands)

~23.4
~13.8
~6.9
Tecentriq, tiragolumab: Small Cell Lung Cancer (SCLC)

2020 estimates for number of patients (thousands)

- Extensive stage: 78.1
  - EU5: 34.6
  - US: 20.8
  - China (urban+rural): 19.3

- mSCLC 1L drug-treated: 75.7
  - EU5: 20.5
  - US: 10.2
  - China (urban+rural): 5.6

- mSCLC 2L drug-treated: ~115.8
  - EU5: 20.5
  - US: 10.2
  - China (urban+rural): 5.6

- mSCLC 3L drug-treated: ~41
  - EU5: 10.2
  - US: 5.6
  - China (urban+rural): 4.9

Source: Roche/Genentech
Zelboraf: Adjuvant BRAF+ stage IIc and III Melanoma

2020 estimates for number of patients

- Stages IIc and III (resectable+unresectable): 10.3
  - EU: 7.8
  - US: 2.5
- Drug-treated early stage melanoma IIc-III (resectable): 2.4
  - EU: 1.1
  - US: 1.3
- BRAF mutation positive, drug-treated stages IIc and III (resectable): ~2.3k

Source: Roche/Genentech; Zelboraf in collaboration with Plexxikon, a member of Daiichi Sankyo Group
Zelboraf:  
1L BRAF+ metastatic Melanoma (mM)

Source: Roche/Genentech; Zelboraf in collaboration with Plexxikon, a member of Daiichi Sankyo Group
**Erivedge:**

**Advanced Basal Cell Carcinoma (BCC)**

![Chart showing BCC incidence and aBCC incidence estimates for 2020](chart.png)

- **Total BCC Incidence (thousands):** 565.2 (EU) + 519.6 (US) = 1,084.8
- **Estimated aBCC Incidence (thousands):** ~43.2

Source: Roche/Genentech
Avastin: Colorectal Cancer (CRC)

- The target population for Avastin in 1L CRC is ~238,200 patients and in 2L CRC ~128,300 patients

Source: Roche/Genentech
Tecentriq:
Metastatic Urothelial Bladder Cancer (mUBC)

Source: Roche/Genentech
Tecentriq: Renal Cell Carcinoma (RCC)

2020 estimates for number of patients

- Newly diagnosed all RCC
  - EU5: 59.6
  - US: 60.4
- 1L treated
  - EU5: 14.1
  - US: 13.1
- Adjuvant
  - EU5: 9.9
  - US: 10.0

Source: Roche/Genentech
Tecentriq, Avastin: Hepatic Cell Carcinoma (HCC)

Source: Roche/Genentech

2020 estimates for number of patients

HCC incidence

1L treated

2L treated

(Thousands)

327.0

28.7

33.4

127.4

12.3

3.3

327.0

127.4

12.3

3.3

327.0

127.4

12.3

3.3

327.0

127.4

12.3

3.3

Source: Roche/Genentech
Tiragolumab:
Esophageal squamous cell carcinoma (ESCC)

Source: Roche/Genentech
Ipatasertib
Metastatic castration-resistant prostate cancer (mCRPC)

2020 estimates for number of patients

Source: Roche/Genentech
Gazyva, MabThera/Rituxan: 
Indolent Non-Hodgkin’s Lymphoma (iNHL)

Source: Roche/Genentech; Gazyva in collaboration with Biogen
**Polivy, MabThera/Rituxan:**

*Aggressive Non-Hodgkin`s Lymphoma (aNHL/DLBCL)*

- **2020 estimates for number of patients**
  - DLBCL incident patients: 29.5 (thousands)
  - 1L DLBCL treated: 26.6 (thousands)
  - 2L DLBCL treated: 8.2 (thousands)
  - 3L+ DLBCL treated: 4.8 (thousands)

- **2020 estimates for number of patients**
  - EU5: 26.7 (thousands)
  - US: 24.0 (thousands)
  - 2L DLBCL treated: 7.4 (thousands)
  - 3L+ DLBCL treated: 4.3 (thousands)

Source: Roche/Genentech; Polatuzumab vedotin in collaboration with Seattle Genetics; DLBCL = diffuse large B-Cell Non-Hodgkin’s lymphoma;
Gazyva, Venclexta, MabThera/Rituxan:
Chronic Lymphocytic Leukemia (CLL)

Source: Roche/Genentech; Gazyva in collaboration with Biogen; Venclexta in collaboration with AbbVie
Venclexta: Acute Myeloid Leukemia (AML)

Source: Roche/Genentech; Venclexta in collaboration with AbbVie
Venclexta:
Multiple Myeloma (MM)

Source: Roche/Genentech; Venclexta in collaboration with AbbVie
Hemlibra:
Hemophilia A

2020 estimates for number of patients

- Inhibitor patients
- Non-inhibitor patients
- Pediatric haemophilia A
- Adult haemophilia A

Source: Roche/Genentech; Hemlibra in collaboration with Chugai
Oncology

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Faricimab, Port Delivery System (PDS), Lucentis: Age-related Macular Degeneration (AMD)

2020 estimates for number of patients

- Prevalence: 2,256,468 (EU5) + 1,873,024 (US) = 4,129,492
- Diagnosed: 2,256,468 (EU5) + 1,873,024 (US) = 4,129,492
- Treated population: 2,256,468 (EU5) + 1,702,024 (US) = 3,958,492

Source: Roche/Genentech
Faricimab, Port Delivery System (PDS), Lucentis: Diabetic Macular Edema (DME)

Source: Roche/Genentech

Prevalence: ~6.2M
- EU5: 4075 (thousands)
- US: 2122 (thousands)

Diagnosed: ~4.7M
- EU5: 3311 (thousands)
- US: 1415 (thousands)

Treated for DME: ~1.5M
- EU5: 438 (thousands)
- US: 1011 (thousands)
Port Delivery System (PDS), Lucentis: Retinal Vein Occlusion (RVO)

Source: Roche/Genentech; based on 2019 estimates
RG6312, RG6147, RG6299*: Geographic Atrophy (GA)

Source: Roche/Genentech; * Study conducted by Ionis, Roche has option to in-license
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Xofluza:
*Influenza A & B*

Source: Roche/Genentech; Baloxavir marboxil co-developed with Shionogi with Roche holding worldwide license excluding Japan and Taiwan
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Ocrevus, fenebrutinib: Multiple Sclerosis (MS)

Source: Roche/Genentech
Ervysdi (risdiplam):
*Spinal Muscular Atrophy (SMA)*

Diagnosed prevalence

<table>
<thead>
<tr>
<th>Type</th>
<th>EU5</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I</td>
<td>7.4</td>
<td>0.7</td>
</tr>
<tr>
<td>Type II</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Type III</td>
<td>3.8</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Source: Roche/Genentech; Risdiplam in collaboration with PTC Therapeutics and SMA Foundation
Myostatin inhibiting adnectin fusion protein (RG6206): 
*Duchenne Muscular Dystrophy (DMD)*

Source: Roche/Genentech
Tominersen (HTT-ASO, RG6042): Huntington’s Disease (HD)

2020 estimates for number of patients

Total prevalent population

Diagnosed population

Source: Roche/Genentech; HTT-ASO licensed from IONS Pharmaceuticals
Gantenerumab, semorinemab: Alzheimer’s Disease (AD)

Source: Roche/Genentech; aMCI=amnestic mild cognitive impairment; Crenezumab in collaboration with AC Immune; Gantenerumab in collaboration with MorphoSys
Enspryng (satralizumab, RG6168): Neuromyelitis Optica (NMO)

2020 estimates for number of patients

NMOSD diagnosed prevalence

Source: Roche/Genentech; Clinical development by Chugai; assumes all diagnosed patients are treated
Prasinezumab (RG7935): Parkinson’s Disease (PD)

Diagnosed population

- EU5: 1.3
- US: 1.0
- China (urban + rural): 0.7

Early PD (H&Y stage 1 and 2)

- EU5: 0.6
- US: 0.7
- China (urban + rural): 0.7

~2M

2020 estimates for number of patients

Source: Roche/Genentech; H&Y: Hoehn & Yahr scale; Prasinezumab in collaboration with Prothena
Crovalimab (RG6107, SKY59):
Paroxysmal Nocturnal Hemoglobinuria (PNH)

2020 estimates for number of patients

Diagnosed Prevalence

Drug Treated Prevalence

Source: Roche/Genentech
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Immunology
rhPentraxin-2; Esbriet:  
*Idiopathic Pulmonary Fibrosis (IPF)*

Diagnosed prevalence by severity:
- ~20% severe
- ~80% mild-to-moderate

2020 estimates for number of patients:
- Diagnosed prevalence: 66.9 (EU5) + 66.2 (US) = 133.1
- Patients on IPF approved therapies: 53.9 (EU5) + 24.6 (US) = 78.5

Source: Roche/Genentech
**Xolair:**

**Moderate to severe Asthma**

- **Moderate to Severe Asthma:**
  - EU Adolescents: 0.3
  - US Adolescents: 0.5
  - EU Adults: 4.4
  - US Adults: 4.0

- **Uncontrolled Asthma:**
  - EU Adolescents: 0.2
  - US Adolescents: 1.3
  - EU Adults: 1.9
  - US Adults: 1.1

- **Allergic Asthma:**
  - EU Adolescents: 0.7
  - US Adolescents: 0.2
  - EU Adults: 1.6
  - US Adults: 0.1

**2020 estimates for number of patients (thousands):**
- Moderate to Severe Asthma: ~9.2M
- Uncontrolled Asthma: ~2.5M
- Allergic Asthma: ~7.5M

*Source: Roche/Genentech*
Xolair: Nasal Polyps

Prevalent population

2020 estimates for number of patients

(thousands)

New Annual Cases

Source: Roche/Genentech
Xolair:
Chronic idiopathic urticaria (CIU)

2020 estimates for number of patients

- **Idiopathic**: 1,658.9 thousands
  - EU5: 1,403.6
  - US: 1,081.3

- **Age 12+**: 1,081.3 thousands
  - EU5: 1,081.3
  - US: 1,403.6

Source: Roche/Genentech
Xolair:
Food allergy

2020 estimates for number of patients

Prevalence of multiple food allergies

US Only

Treated by a specialist

Pediatric and adolescent
Adult

Source: Roche/Genentech
Actemra, MabThera/Rituxan: 
**Rheumatoid Arthritis (RA)**

Global target population for Actemra and MabThera/Rituxan in rheumatoid arthritis is ~1.3M biologics eligible patients.

US Biologic treated patients by line of therapy:
- 68.8k (1L)
- 45.3k (2L)
- 67k (3L+)

2020 estimates for number of patients:
- Prevalent population: 2.93 (EU5: 2.31, US: 0.69)
- Diagnosed: 2.44 (EU5: 1.93, US: 0.58)
- Diagnosed moderate to severe: 1.93 (EU5: 1.44)

Estimates for number of patients in 2020:
- Prevalent population
- Diagnosed
- Diagnosed moderate to severe
- Eligible for treatment with biologics
Actemra:
Systemic Juvenile Idiopathic Arthritis (sJIA)

Source: Roche/Genentech; Actemra in collaboration with Chugai
Actemra: Polyarticular Juvenile Idiopathic Arthritis (pJIA)

2020 estimates for number of patients

<table>
<thead>
<tr>
<th>Category</th>
<th>EU5</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalent population</td>
<td>4.3</td>
<td>39.6</td>
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<tr>
<td>Diagnosed</td>
<td>3.6</td>
<td>22.0</td>
</tr>
<tr>
<td>Treated</td>
<td>3.4</td>
<td>20.9</td>
</tr>
</tbody>
</table>

Source: Roche/Genentech; Actemra in collaboration with Chugai
Actemra:
Giant Cell Arteritis (GCA)

2020 estimates for number of patients

- Diagnosed: 237.0 (EU5 85.0, US 152.0)
- Treated: 225.0 (EU5 78.0, US 147.0)

Source: Roche/Genentech; Actemra in collaboration with Chugai

~303k (thousands)
Etrolizumab:
Crohn’s Disease (CD)

2020 estimates for number of patients

- Diagnosed prevalence: 580.2 (thousands)
  - EU5: 474.2
  - US: 106.0
- Moderate to severe: 319.1 (thousands)
  - EU5: 251.3
  - US: 67.8
- Patients on biologic therapies: 153.2 (thousands)
  - EU5: 113.1
  - US: 40.1
- Patients failing aTNF: 56.7 (thousands)
  - EU5: 41.8
  - US: 14.9

Source: Roche/Genentech
Gazyva:
*Lupus Nephritis (LN)*

Source: Roche/Genentech
Doing now what patients need next