# **Introduction of biopharmaceuticals in Europe: A cross-sectional study of early diffusion patterns and data availability**

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### Disclosure

A.C., G.S., I.L., K.A., O.T., T-D.P., and T.T. are affiliated with organizations involved in payer decision-making and the reimbursement of medicines, although they may not be directly engaged in such activities. J.S. and L.S. are affiliated with organizations involved in health technology assessment in advisory or expert roles. All other authors declare no conflicts of interest related to payer or HTA agencies.

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# Supplementary material

## A) ­– Biologicals, ATC, DDD and initial indications

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Product | ATC code | Substance | Units (u), Milligram (mg), Microgram (mcg) per DDD | Initital indication |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 40 u | Type 2 diabetes mellitus |
| Repatha | C10AX13 | Evolocumab | 10 mg | Hypercholesterolemia and mixed dyslipidaemia, |
| Praluent | C10AX14 | Alirocumab | 5.4 mg | Hypercholesterolemia and mixed dyslipidaemia, |
| Dupixent | D11AH05 | Dupilumab | 21.4 mg | Atopic dermatitis |
| Rekovelle | G03GA10 | Follitropin Delta | 12 mcg | Controlled ovarian stimulation for undergoing assisted reproductive technologies |
| Cosentyx | L04AC10 | Secukinumab | 10 mg | Moderate to severe plaque psoriasis |
| Kyntheum | L04AC12 | Brodalumab | 15 mg | Moderate to severe plaque psoriasis |
| Taltz | L04AC13 | Ixekizumab | 2.9 mg | Moderate to severe plaque psoriasis |
| Kevzara | L04AC14 | Sarilumab | 14.3 mg | Moderately to severely active rheumatoid arthritis |
| Tremfya | L04AC16 | Guselkumab | 1.79 mg | Moderate to severe plaque psoriasis |
| Ilumetri | L04AC17 | Tildrakizumab | 1.11 mg | Moderate to severe plaque psoriasis |
| Skyrizi | L04AC18 | Risankizumab | 1.67 mg | Moderate to severe plaque psoriasis |
| Aimovig | N02CD01 | Erenumab | 2.5 mg | Prophylaxis of migraine |
| Emgality | N02CD02 | Galcanezumab | 4 mg | Prophylaxis of migraine |
| Ajovy | N02CD03 | Fremanezumab | 7.5 mg | Prophylaxis of migraine |
| Nucala | R03DX09 | Mepolizumab | 3.6 mg | Add-on treatment for severe eosinophilic asthma |
| Fasenra | R03DX10 | Benralizumab | 0.54 mg | Add-on treatment for severe eosinophilic asthma |
| Sources: DDDs from WHO Collaborating Centre for Drug Statistics Methodology. ATC classification index with DDDs 2024. Initial approved indications from the European Medicines Agency - Download Medicine Data - EPAR 2023. | | | | |

## B) ­– Data collection template

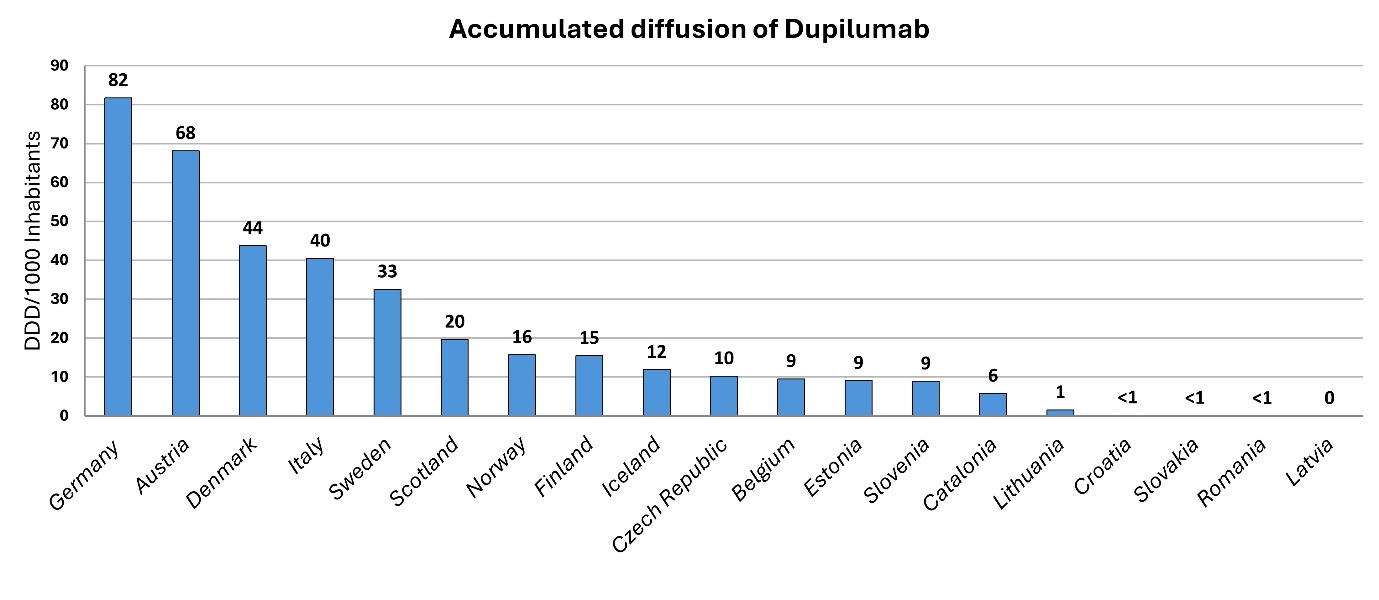
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Medicine name** | **ATC code** | **Substance** | **Time period** | **Prescription** | **Time period** | **Hospital care** | **Time period** | **Wholesaler** |
| **Suliqua** | **A10AE54** | **Insulin glargine, lixisenatide** | **2015-2022** | **0** | **2015-2022** | **0** | **2015-2022** | **0** |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 2015 | X | 2015 | 0 | 2015 | X |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 2016 | X | 2016 | X | 2016 | X |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 2017 | X | 2017 | X | 2017 | X |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 2018 | X | 2018 | X | 2018 | X |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 2019 | X | 2019 | X | 2019 | X |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 2020 | X | 2020 | X | 2020 | X |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 2021 | X | 2021 | X | 2021 | X |
| Suliqua | A10AE54 | Insulin glargine, lixisenatide | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Repatha** | **C10AX13** | **Evolocumab** | **2015-2022** | **0** | **2015-2022** | **0** | **2015-2022** | **0** |
| Repatha | C10AX13 | Evolocumab | 2015 | X | 2015 | X | 2015 | X |
| Repatha | C10AX13 | Evolocumab | 2016 | X | 2016 | X | 2016 | X |
| Repatha | C10AX13 | Evolocumab | 2017 | X | 2017 | X | 2017 | X |
| Repatha | C10AX13 | Evolocumab | 2018 | X | 2018 | X | 2018 | X |
| Repatha | C10AX13 | Evolocumab | 2019 | X | 2019 | X | 2019 | X |
| Repatha | C10AX13 | Evolocumab | 2020 | X | 2020 | X | 2020 | X |
| Repatha | C10AX13 | Evolocumab | 2021 | X | 2021 | X | 2021 | X |
| Repatha | C10AX13 | Evolocumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Praluent** | **C10AX14** | **Alirocumab** | **2015-2022** | **0** | **2015-2022** | **0** | **2015-2022** | **0** |
| Praluent | C10AX14 | Alirocumab | 2015 | X | 2015 | X | 2015 | X |
| Praluent | C10AX14 | Alirocumab | 2016 | X | 2016 | X | 2016 | X |
| Praluent | C10AX14 | Alirocumab | 2017 | X | 2017 | X | 2017 | X |
| Praluent | C10AX14 | Alirocumab | 2018 | X | 2018 | X | 2018 | X |
| Praluent | C10AX14 | Alirocumab | 2019 | X | 2019 | X | 2019 | X |
| Praluent | C10AX14 | Alirocumab | 2020 | X | 2020 | X | 2020 | X |
| Praluent | C10AX14 | Alirocumab | 2021 | X | 2021 | X | 2021 | X |
| Praluent | C10AX14 | Alirocumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Dupixent** | **D11AH05** | **Dupilumab** | **2015-2022** | **0** | **2015-2022** | **0** | **2015-2022** | **0** |
| Dupixent | D11AH05 | Dupilumab | 2015 | X | 2015 | X | 2015 | X |
| Dupixent | D11AH05 | Dupilumab | 2016 | X | 2016 | X | 2016 | X |
| Dupixent | D11AH05 | Dupilumab | 2017 | X | 2017 | X | 2017 | X |
| Dupixent | D11AH05 | Dupilumab | 2018 | X | 2018 | X | 2018 | X |
| Dupixent | D11AH05 | Dupilumab | 2019 | X | 2019 | X | 2019 | X |
| Dupixent | D11AH05 | Dupilumab | 2020 | X | 2020 | X | 2020 | X |
| Dupixent | D11AH05 | Dupilumab | 2021 | X | 2021 | X | 2021 | X |
| Dupixent | D11AH05 | Dupilumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Rekovelle** | **G03GA10** | **Follitropin delta** | **2015-2022** | **0** | **2015-2022** | **0** | **2015-2022** | **0** |
| Rekovelle | G03GA10 | Follitropin delta | 2015 | X | 2015 | X | 2015 | X |
| Rekovelle | G03GA10 | Follitropin delta | 2016 | X | 2016 | X | 2016 | X |
| Rekovelle | G03GA10 | Follitropin delta | 2017 | X | 2017 | X | 2017 | X |
| Rekovelle | G03GA10 | Follitropin delta | 2018 | X | 2018 | X | 2018 | X |
| Rekovelle | G03GA10 | Follitropin delta | 2019 | X | 2019 | X | 2019 | X |
| Rekovelle | G03GA10 | Follitropin delta | 2020 | X | 2020 | X | 2020 | X |
| Rekovelle | G03GA10 | Follitropin delta | 2021 | X | 2021 | X | 2021 | X |
| Rekovelle | G03GA10 | Follitropin delta | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Cosentyx** | **L04AC10** | **Secukinumab** | **2015-2022** | **0** | **2015-2022** | **0** | **2015-2022** | **0** |
| Cosentyx | L04AC10 | Secukinumab | 2015 | X | 2015 | X | 2015 | X |
| Cosentyx | L04AC10 | Secukinumab | 2016 | X | 2016 | X | 2016 | X |
| Cosentyx | L04AC10 | Secukinumab | 2017 | X | 2017 | X | 2017 | X |
| Cosentyx | L04AC10 | Secukinumab | 2018 | X | 2018 | X | 2018 | X |
| Cosentyx | L04AC10 | Secukinumab | 2019 | X | 2019 | X | 2019 | X |
| Cosentyx | L04AC10 | Secukinumab | 2020 | X | 2020 | X | 2020 | X |
| Cosentyx | L04AC10 | Secukinumab | 2021 | X | 2021 | X | 2021 | X |
| Cosentyx | L04AC10 | Secukinumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Kyntheum** | **L04AC12** | **Brodalumab** | **2015-2022** | **0** | **2015-2022** | **0** | **2015-2022** | **0** |
| Kyntheum | L04AC12 | Brodalumab | 2015 | X | 2015 | X | 2015 | X |
| Kyntheum | L04AC12 | Brodalumab | 2016 | X | 2016 | X | 2016 | X |
| Kyntheum | L04AC12 | Brodalumab | 2017 | X | 2017 | X | 2017 | X |
| Kyntheum | L04AC12 | Brodalumab | 2018 | X | 2018 | X | 2018 | X |
| Kyntheum | L04AC12 | Brodalumab | 2019 | X | 2019 | X | 2019 | X |
| Kyntheum | L04AC12 | Brodalumab | 2020 | X | 2020 | X | 2020 | X |
| Kyntheum | L04AC12 | Brodalumab | 2021 | X | 2021 | X | 2021 | X |
| Kyntheum | L04AC12 | Brodalumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Taltz** | **L04AC13** | **Ixekizumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Taltz | L04AC13 | Ixekizumab | 2015 | X | 2015 | X | 2015 | X |
| Taltz | L04AC13 | Ixekizumab | 2016 | X | 2016 | X | 2016 | X |
| Taltz | L04AC13 | Ixekizumab | 2017 | X | 2017 | X | 2017 | X |
| Taltz | L04AC13 | Ixekizumab | 2018 | X | 2018 | X | 2018 | X |
| Taltz | L04AC13 | Ixekizumab | 2019 | X | 2019 | X | 2019 | X |
| Taltz | L04AC13 | Ixekizumab | 2020 | X | 2020 | X | 2020 | X |
| Taltz | L04AC13 | Ixekizumab | 2021 | X | 2021 | X | 2021 | X |
| Taltz | L04AC13 | Ixekizumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Kevzara** | **L04AC14** | **Sarilumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Kevzara | L04AC14 | Sarilumab | 2015 | X | 2015 | X | 2015 | X |
| Kevzara | L04AC14 | Sarilumab | 2016 | X | 2016 | X | 2016 | X |
| Kevzara | L04AC14 | Sarilumab | 2017 | X | 2017 | X | 2017 | X |
| Kevzara | L04AC14 | Sarilumab | 2018 | X | 2018 | X | 2018 | X |
| Kevzara | L04AC14 | Sarilumab | 2019 | X | 2019 | X | 2019 | X |
| Kevzara | L04AC14 | Sarilumab | 2020 | X | 2020 | X | 2020 | X |
| Kevzara | L04AC14 | Sarilumab | 2021 | X | 2021 | X | 2021 | X |
| Kevzara | L04AC14 | Sarilumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Tremfya** | **L04AC16** | **Guselkumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Tremfya | L04AC16 | Guselkumab | 2015 | X | 2015 | X | 2015 | X |
| Tremfya | L04AC16 | Guselkumab | 2016 | X | 2016 | X | 2016 | X |
| Tremfya | L04AC16 | Guselkumab | 2017 | X | 2017 | X | 2017 | X |
| Tremfya | L04AC16 | Guselkumab | 2018 | X | 2018 | X | 2018 | X |
| Tremfya | L04AC16 | Guselkumab | 2019 | X | 2019 | X | 2019 | X |
| Tremfya | L04AC16 | Guselkumab | 2020 | X | 2020 | X | 2020 | X |
| Tremfya | L04AC16 | Guselkumab | 2021 | X | 2021 | X | 2021 | X |
| Tremfya | L04AC16 | Guselkumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Ilumetri** | **L04AC17** | **Tildrakizumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Ilumetri | L04AC17 | Tildrakizumab | 2015 | X | 2015 | X | 2015 | X |
| Ilumetri | L04AC17 | Tildrakizumab | 2016 | X | 2016 | X | 2016 | X |
| Ilumetri | L04AC17 | Tildrakizumab | 2017 | X | 2017 | X | 2017 | X |
| Ilumetri | L04AC17 | Tildrakizumab | 2018 | X | 2018 | X | 2018 | X |
| Ilumetri | L04AC17 | Tildrakizumab | 2019 | X | 2019 | X | 2019 | X |
| Ilumetri | L04AC17 | Tildrakizumab | 2020 | X | 2020 | X | 2020 | X |
| Ilumetri | L04AC17 | Tildrakizumab | 2021 | X | 2021 | X | 2021 | X |
| Ilumetri | L04AC17 | Tildrakizumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Skyrizi** | **L04AC18** | **Risankizumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Skyrizi | L04AC18 | Risankizumab | 2015 | X | 2015 | X | 2015 | X |
| Skyrizi | L04AC18 | Risankizumab | 2016 | X | 2016 | X | 2016 | X |
| Skyrizi | L04AC18 | Risankizumab | 2017 | X | 2017 | X | 2017 | X |
| Skyrizi | L04AC18 | Risankizumab | 2018 | X | 2018 | X | 2018 | X |
| Skyrizi | L04AC18 | Risankizumab | 2019 | X | 2019 | X | 2019 | X |
| Skyrizi | L04AC18 | Risankizumab | 2020 | X | 2020 | X | 2020 | X |
| Skyrizi | L04AC18 | Risankizumab | 2021 | X | 2021 | X | 2021 | X |
| Skyrizi | L04AC18 | Risankizumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Aimovig** | **N02CD01** | **Erenumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Aimovig | N02CD01 | Erenumab | 2015 | X | 2015 | X | 2015 | X |
| Aimovig | N02CD01 | Erenumab | 2016 | X | 2016 | X | 2016 | X |
| Aimovig | N02CD01 | Erenumab | 2017 | X | 2017 | X | 2017 | X |
| Aimovig | N02CD01 | Erenumab | 2018 | X | 2018 | X | 2018 | X |
| Aimovig | N02CD01 | Erenumab | 2019 | X | 2019 | X | 2019 | X |
| Aimovig | N02CD01 | Erenumab | 2020 | X | 2020 | X | 2020 | X |
| Aimovig | N02CD01 | Erenumab | 2021 | X | 2021 | X | 2021 | X |
| Aimovig | N02CD01 | Erenumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Emgality** | **N02CD02** | **Galcanezumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Emgality | N02CD02 | Galcanezumab | 2015 | X | 2015 | X | 2015 | X |
| Emgality | N02CD02 | Galcanezumab | 2016 | X | 2016 | X | 2016 | X |
| Emgality | N02CD02 | Galcanezumab | 2017 | X | 2017 | X | 2017 | X |
| Emgality | N02CD02 | Galcanezumab | 2018 | X | 2018 | X | 2018 | X |
| Emgality | N02CD02 | Galcanezumab | 2019 | X | 2019 | X | 2019 | X |
| Emgality | N02CD02 | Galcanezumab | 2020 | X | 2020 | X | 2020 | X |
| Emgality | N02CD02 | Galcanezumab | 2021 | X | 2021 | X | 2021 | X |
| Emgality | N02CD02 | Galcanezumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Ajovy** | **N02CD03** | **Fremanezumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Ajovy | N02CD03 | Fremanezumab | 2015 | X | 2015 | X | 2015 | X |
| Ajovy | N02CD03 | Fremanezumab | 2016 | X | 2016 | X | 2016 | X |
| Ajovy | N02CD03 | Fremanezumab | 2017 | X | 2017 | X | 2017 | X |
| Ajovy | N02CD03 | Fremanezumab | 2018 | X | 2018 | X | 2018 | X |
| Ajovy | N02CD03 | Fremanezumab | 2019 | X | 2019 | X | 2019 | X |
| Ajovy | N02CD03 | Fremanezumab | 2020 | X | 2020 | X | 2020 | X |
| Ajovy | N02CD03 | Fremanezumab | 2021 | X | 2021 | X | 2021 | X |
| Ajovy | N02CD03 | Fremanezumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Nucala** | **R03DX09** | **Mepolizumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Nucala | R03DX09 | Mepolizumab | 2015 | X | 2015 | X | 2015 | X |
| Nucala | R03DX09 | Mepolizumab | 2016 | X | 2016 | X | 2016 | X |
| Nucala | R03DX09 | Mepolizumab | 2017 | X | 2017 | X | 2017 | X |
| Nucala | R03DX09 | Mepolizumab | 2018 | X | 2018 | X | 2018 | X |
| Nucala | R03DX09 | Mepolizumab | 2019 | X | 2019 | X | 2019 | X |
| Nucala | R03DX09 | Mepolizumab | 2020 | X | 2020 | X | 2020 | X |
| Nucala | R03DX09 | Mepolizumab | 2021 | X | 2021 | X | 2021 | X |
| Nucala | R03DX09 | Mepolizumab | 2022 | X | 2022 | X | 2022 | X |
|  |  |  |  |  |  |  |  |  |
| **Fasenra** | **R03DX10** | **Benralizumab** | 2015-2022 | 0 | 2015-2022 | 0 | 2015-2022 | 0 |
| Fasenra | R03DX10 | Benralizumab | 2015 | X | 2015 | X | 2015 | X |
| Fasenra | R03DX10 | Benralizumab | 2016 | X | 2016 | X | 2016 | X |
| Fasenra | R03DX10 | Benralizumab | 2017 | X | 2017 | X | 2017 | X |
| Fasenra | R03DX10 | Benralizumab | 2018 | X | 2018 | X | 2018 | X |
| Fasenra | R03DX10 | Benralizumab | 2019 | X | 2019 | X | 2019 | X |
| Fasenra | R03DX10 | Benralizumab | 2020 | X | 2020 | X | 2020 | X |
| Fasenra | R03DX10 | Benralizumab | 2021 | X | 2021 | X | 2021 | X |
| Fasenra | R03DX10 | Benralizumab | 2022 | X | 2022 | X | 2022 | X |

## C) – Country information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***‍Code*** | ***Country*** | ***Source of data***  *(From Pharmacy, Hospital, Reimbursement, Insurance, Sales, Wholesalers or Report study)* | ***Covering what type of diffusion***  *(Out-of-hospital, Hospital or Wholesalers)* | ***Source***  *(Full name* & *Abbreviation)* |
| AT | Austria | *Insurance & reimbursement* | Out-of-hospital | Dachverband der Österreichischen Sozialversicherungsträger |
| ‍*BE* | *Belgium* | Pharmacy & Hospital | Out-of-hospital & Hospital | National Institute for Health and Disability Insurance (NIHDI) |
| ‍*BG* | *Bulgaria* | Reimbursement | Wholesalers | National health insurance fund (NHIF) |
| ‍*CAT* | *Catalonia (Spain)* | Reimbursement | Out-of-hospital & Hospital | Sistema d'Informació Sanitària del Sistema Català de Salut (SISCAT) & Servei Català de la Salut (CATSALUT) |
| ‍*CZ* | *Czech Republic* | Insurance & Wholesaler | Out-of-hospital & Wholesalers | State Institute for Drug Control (SUKL) |
| ‍*DE* | *Germany* | Insurance | Out-of-hospital | Federal Ministry of Health & GKV-Arzneimittel-Schnellinformation (GAmSi) |
| ‍*DK* | *Denmark* | Sales | All three | Medstat |
| ‍*EE* | *Estonia* | Wholesalers | Out-of-hospital & Hospital | Estonian State Agency of Medicine (RAVIMIAMET) |
| ‍*FI* | *Finland* | Wholesaler | All three | Finnish Medicines Agency (Fimea) |
| ‍*FR* | *France* | Pharmacy | Out-of-hospital | L’Assurance Maladie (ASSURANCE) |
| ‍*HR* | *Croatia* | Sales | Out-of-hospital & Hospital | Agency for Medicinal Products and Medical Devices (HALMED) |
| ‍*HU* | *Hungary* | Reimbursement | Out-of-hospital | National Health Insurance Fund Administration (NHIFA) |
| ‍*IE* | *Republic of Ireland* | Pharmacy | Out-of-hospital | Health Service Executive top 100 list from high tech drug scheme by the Primary Care Reimbursement Service (PCRS) |
| IS | Iceland | Pharmacy, Hospital & wholesalers | All three | National Prescription registry, Icelandic Medicine Agency, Landspitali University Hospital |
| ‍*IT* | *Italy* | Pharmacy & Hospital | Out-of-hospital & Hospital | Italian Medicines Agency (AIFA) |
| ‍*LT* | *Lithuania* | Wholesaler | Out-of-hospital & Hospital | Lithuanian Medicines Agency (VVKT) |
| LV | Latvia | Wholesalers | Wholesalers | State Agency of Medicines Republic of Latvia |
| ‍*NL* | *Netherlands* | Pharmacy | Out-of-hospital | Gipdatabank |
| ‍*NO* | *Norway* | Pharmacy & Wholesaler | Reseptregisteret - Out-of-hospital & FHI - Wholesalers | Reseptregisteret & Norwegian Drug Wholesales Statistics (FHI) |
| ‍*PT* | *Portugal* | Report study/Extrapolation | Hospital | HMR information system |
| ‍*RO* | *Romania* | Report study/Extrapolation | Out-of-hospital & Hospital | CEGEDIM Romania, from pharma & hospital report, a panel-based survey of drug consumption in retail pharmacies and hospitals (sell-out), extrapolated at national level. |
| ‍*SCO* | *Scotland (United Kingdom)* | Reimbursement & Hospital | PCA - Out-of-hospital HMUD - Hospital | Prescription Cost Analysis (PCA) & Hospital Medicines Utilization Database (HMUD) From Public Health Scotland (PHS) |
| ‍*SE* | *Sweden* | Sales | All three | Swedish eHealth Agency |
| ‍*SI* | *Slovenia* | Reimbursement | Out-of-hospital & Hospital | Zavod za Zdravstveno Zavarovanje Slovenije (ZZZS) |
| ‍*SK* | *Slovakia* | Sales | All three | State Institute for Drug Control (SIDC) & Consumption of Medicinal Products in Slovakia (MCR, s.r.o.) |

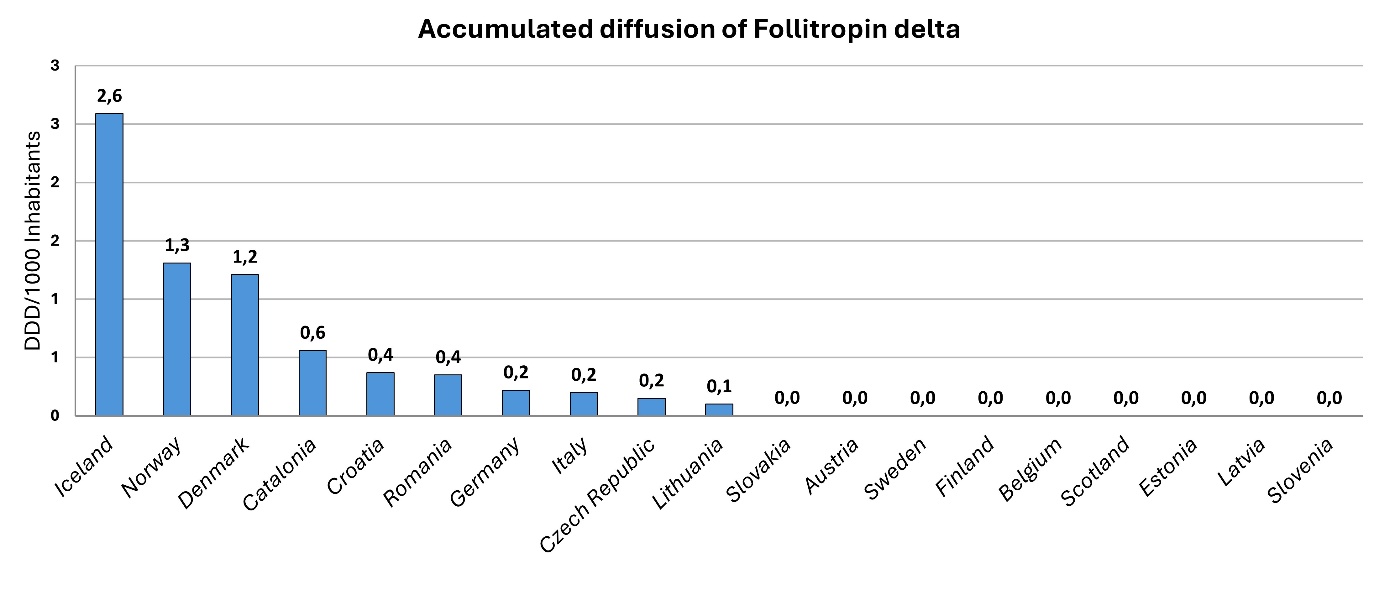
## D) ­– Accumulated diffusion of medicines

A graph with blue squares

AI-generated content may be incorrect.Supplementary figure 1. Accumulated Defined Daily Doses per 1,000 inhabitants over the first four years following market authorization for the fixed combination of insulin glargine and lixisenatide (A10AE54) across the study population. Supplementary figure 2. Accumulated Defined Daily Doses per 1,000 inhabitants over the first four years following market authorization for the PCSK-9 inhibitors, evolocumab (C10AX13) and alirocumab (C10AX14) across the study population.

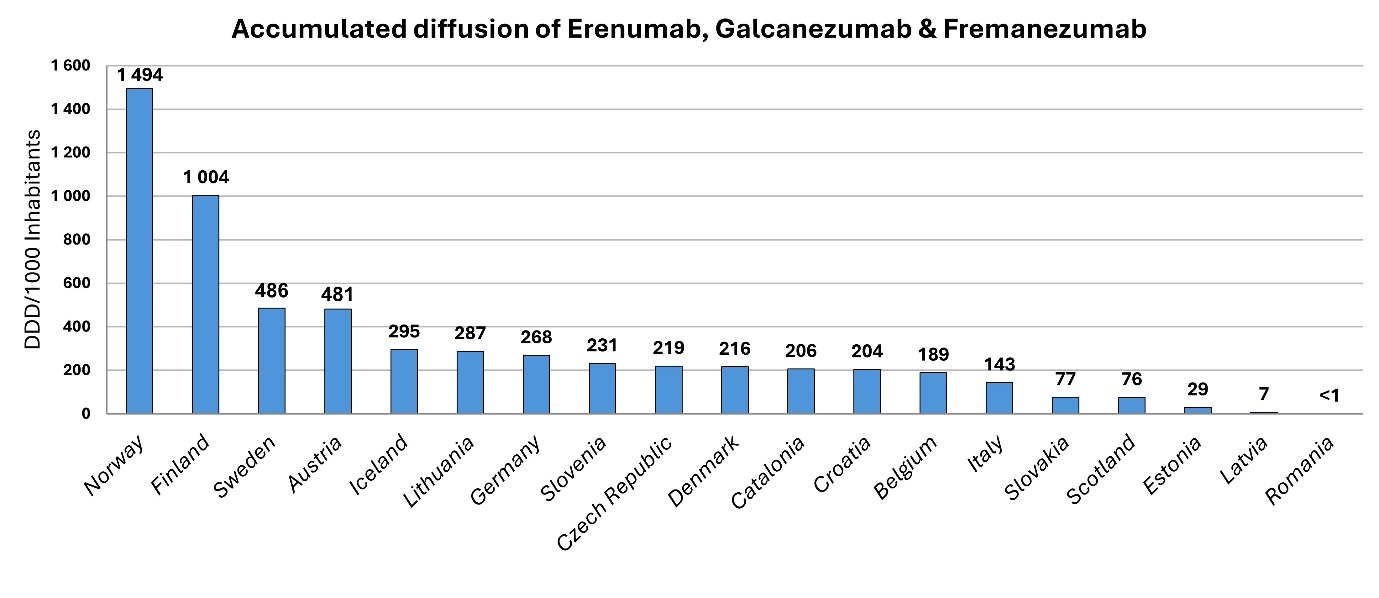
A graph of different sizes and colors

AI-generated content may be incorrect.Supplementary figure 3. Accumulated Defined Daily Doses per 1,000 inhabitants over the first four years following market authorization for dupilumab (D11AH05) across the study population.

Supplementary figure 4. Accumulated Defined Daily Doses per 1,000 inhabitants over the first four years following market authorization for follitropin delta (G03GA10) across the study population.

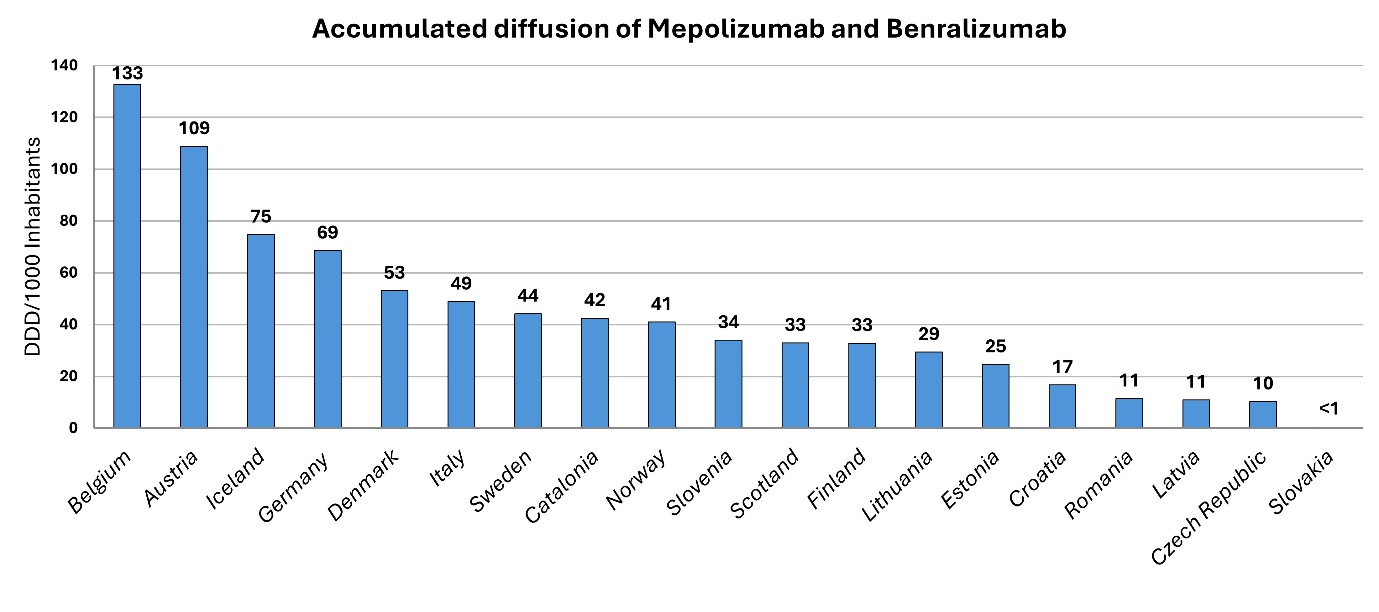
A graph with blue and black text

AI-generated content may be incorrect.Supplementary figure 5. Accumulated Defined Daily Doses per 1,000 inhabitants over the first four years following market authorization for all the immunosuppressive antibodies, within the L04AC group consisting of secukinumab (L04AC10), brodalumab (L04AC12), ixekizumab (L04AC13), sarilumab (L04AC14), guselkumab (L04AC16), tildrakizumab (L04AC17), and risankizumab (L04AC18) across the study population.

Supplementary figure 6. Accumulated Defined Daily Doses per 1,000 inhabitants over the first four years following market authorization for tildrakizumab (L04AC17) across the study population.

A graph with blue squares and black text

AI-generated content may be incorrect.Supplementary figure 7. Accumulated Defined Daily Doses per 1,000 inhabitants over the first four years following market authorization for the CGRP receptor antagonists, within the N02CD group consisting of erenumab (N02CD01), galcanezumab (N02CD02) and fremanezumab (N02CD03) across the study population.

******Supplementary figure 8. Accumulated Defined Daily Doses per 1,000 inhabitants over the first four years following market authorization for both the IL-5 targeting therapies, within the R03DX group consisting ofmepolizumab (R03DX09) and benralizumab (R03DX10) across the study population.