**Appendix I. Search strategy in EMBASE**

('chimeric antigen receptor t-cell'/exp OR 'car t-cell' OR 'car t-lymphocyte' OR 'car engineered t-cell' OR 'car engineered t-lymphocyte' OR 'car modified t-cell' OR 'car modified t-lymphocyte' OR 'chimeric antigen receptor t-cell' OR 'chimeric antigen receptor t-lymphocyte') AND ('cost effectiveness analysis'/exp OR 'cost effectiveness' OR 'cost effectiveness analysis' OR 'cost effectiveness ratio' OR 'cost efficiency analysis')

**Appendix II. Reference trial to estimate market entry of future indications**  
The chosen reference trials to estimate the time of market entry for future CAR T-cell therapy indications are summarized in the table below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Trial name** | **Drug name** | **Indication** | **Target** | **Phase** | **Funding body** | **Sponsor** | **Study start date (dd/mm/yyyy)** |
| NCT03904069 | AMG 553 | AML | FLT3 | I | Industry | Amgen | 15/05/2019 |
| NCT03331198 | JCAR017 | CLL | CD19 | I/II | Industry | Celgene | 26/12/2017 |
| NCT03331198 | Bb2121 | MM | BCMA | II | Industry | Celgene | 13/12/2018 |

**Appendix III. Eligible patient population obtained by averaging both Eurostat and Globocan**

**Appendix IV. Forecasted expenditure per indication and country 2019 – 2029**

![Chart, line chart

Description automatically generated]()

**Appendix V. Incidence rates (for Eurostat forecast) and proportion of eligible patients for CAR T-cell therapy**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Indication** | **IR per 100,000** | | | | | | **Proportion eligible for CAR T-cell therapy** | | | | | |
|  | DE | ES | FR | UK | IT | NL | DE | ES | FR | UK | IT | NL |
| pALL | 2.2 | 1.0a | 3.3 | 2.7 | 2.7a | 2.0 | 0.11 | 0.09b | 0.06 | 0.09b | 0.09b | 0.10 |
| DLBCL | 5.6 | 7.3a | 6.3 | 6.7 | 7.5a | 7.1 | 0.19 | 0.17c | 0.15 | 0.22 | 0.17c | 0.15 |
| MCL | 1.8 | 1.4 | 1.7 | 1.6 | 1.8 | 1.9 | 0.17d | 0.17d | 0.17d | 0.17d | 0.17d | 0.17d |
| FL | 5.9 | 4.6 | 5.5 | 5.3 | 5.8 | 6.1 | 0.15d | 0.15d | 0.15d | 0.15d | 0.15d | 0.15d |
| AML | 6.1 | 4.7 | 6.8 | 6.1 | 5.6 | 3.4 | 0.05d | 0.05d | 0.05d | 0.05d | 0.05d | 0.05d |
| CLL | 6.9 | 8.7 | 9.5 | 7.0 | 10.2 | 10.1 | 0.02d | 0.02d | 0.02d | 0.02d | 0.02d | 0.02d |
| MM | 6.1 | 4.7 | 6.8 | 6.1 | 5.6 | 3.4 | 0.11d | 0.11d | 0.11d | 0.11d | 0.11d | 0.11d |
| aIncidence rate based on ECIS data  bImputed with available data (average) from countries with available data (based on pALL)  cImputed with available data (average) from countries with available data (based on DLBCL)  dBased on expert opinion (average) | | | | | | | | | | | | |

**Appendix VI. Proportions of cancer sub-types for the Globocan forecast**

|  |  |  |  |
| --- | --- | --- | --- |
| **Cancer type in GLOBOCAN** | **Cancer sub-type of interest** | **Proportion used** | **Source** |
| Leukemia | Pediatric acute lymphoblastic leukemia | 0.09 | SEER1 |
| Acute myeloid leukemia | 0.32 | American Cancer Society |
| Chronic lymphocytic leukemia | 0.37 | American Cancer Society |
| Multiple myeloma | Multiple myeloma | NA |  |
| Non-Hodgkin lymphoma | Diffuse large B-cell lymphomas | 0.35 | Li et al. (2018)2 |
|  | Mantle cell lymphoma | 0.08 | Cerhan et al. (2020)3 |
|  | Follicular lymphoma | 0.26 | Sandoval-Sus et al. (2017)4 |

**Appendix VII. Proportion eligible for CAR T-cell therapy**

A screenshot of a cell phone

Description automatically generated

**References belonging to the Appendices**

1. SEER. Acute Lymphocytic Leukemia - Cancer Stat Facts. SEER. Published 2019. Accessed December 3, 2019. https://seer.cancer.gov/statfacts/html/alyl.html

2. Li S, Young KH, Medeiros LJ. Diffuse large B-cell lymphoma. *Pathology*. 2018;50(1):74-87. doi:10.1016/j.pathol.2017.09.006

3. Cerhan JR. Epidemiology of Follicular Lymphoma. *Hematology/Oncology Clinics of North America*. 2020;34(4):631-646. doi:10.1016/j.hoc.2020.02.001

4. Sandoval-Sus JD, Sotomayor EM, Shah BD. Mantle Cell Lymphoma: Contemporary Diagnostic and Treatment Perspectives in the Age of Personalized Medicine. *Hematology/Oncology and Stem Cell Therapy*. 2017;10(3):99-115. doi:10.1016/j.hemonc.2017.02.003