Poster
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Life years generated for relapsed/refractory Mantle Cell Lymphoma patients managed on CAR T in an England NHS setting

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BACKGROUND

- Managed access agreements (MAA) allow patients interim access to therapies
- MAAs are used where data is considered too naive to inform long-term outcomes
- Since the MAA for CAR T in r/r MCL in 2021, CAR T has become the treatment of choice in eligible patients[1] so only historical controls (HC) are available

OBJECTIVE

- To estimate the impact of MAAs on life expectancy in a National Health Service (NHS) setting in England
- For this provisional analysis, we use the example of Chimeric antigen receptor T-cell (CAR T) in relapsed/refractory mantle cell Lymphoma (r/r MCL)

METHODS

- A parametric survival model with a lifetime horizon was used (constructed as part of a wider analysis to assess the cost-effectiveness of CAR T in r/r MCL[2])
- CAR T cohort life years (LYs) were modelled against Historical Cohort (HC) LYs (with HC defined as r/r MCL patients managed on Rituximab, Bendamustine and Cytarabine [R-BAC])
- LYs were estimated based on overall survival reported in ZUMA-2 (CAR T)[3] and published evidence (R-BAC)[4]. Extrapolations were performed according to best practice
- Long-term survivorship (LTS) was assumed for CAR T patients who were alive at 48 months (with standard population mortality adjusted by published data[5])
- Potential cohort gains in LYs were estimated based on patients receiving CAR T in an England NHS setting from 2021 to June 2025 (n=193)[6]
- Exploratory analysis estimated the impact from a 2-year interruption in access to prospective patients. During this time, an estimated 82 patients would instead be treated with R-BAC
- The interruption timeframe was based on a reasonable and likely conservative assumption of the expected time until r/r MCL patients could access an alternative intervention in r/r MCL, comparable to CAR T, should access to CAR T be interrupted

RESULTS

- The model estimated an additional 1,597 LYs (95% CI: 1,132 to 1,936) for the CAR T cohort, compared against expected outcomes for the HC cohort (Fig 1 & 2)
- The exploratory analysis indicated that a 2-year access interruption could result in an estimated 678 LY lost (95% CI: 481 to 822) across the lifetime of a prospective patient cohort
- This loss is equivalent to an 81.9% reduction in LYs (95% CI: 67.5% to 86.8%) over two years for future patients (Fig 3)

Fig 3: Prospective cohort estimated life years with and without a 2-year access interruption

Fig 1: Estimated survival from CAR T compared to HC, per cohort

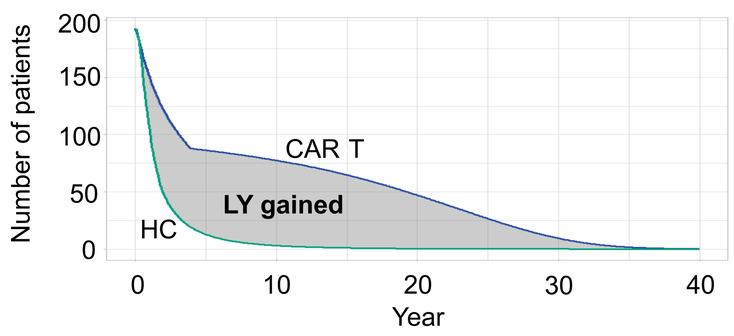
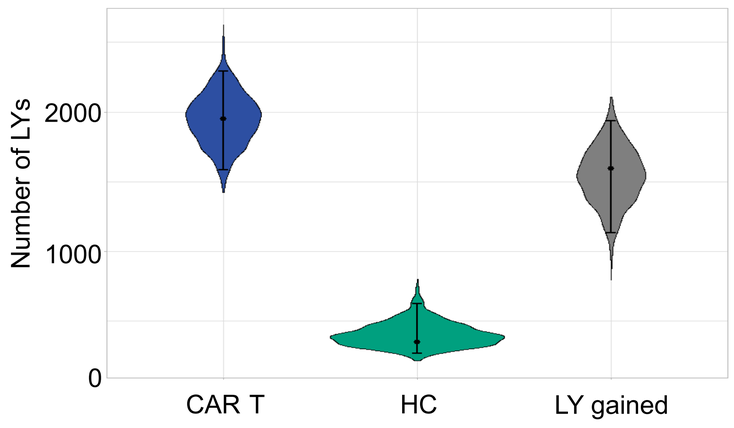


Fig 2: Estimated LYs gained given parametric uncertainty



Interpretation: Black dot represents the base case estimate; the error bar represents the 2.5th and 97.5th percentiles of the uncertainty distribution from the probabilistic sensitivity analyses (PSA). The width of the "violin" shape at any given point indicates the frequency of that value occurring in the PSA outputs.

DISCUSSION

- We estimate that early access to CAR T through the NHS MAA could generate up to 1,597 additional LYs (8.27 LYs per patient) across the lifetime of these r/r MCL patients
- No alternative interventions comparable to CAR T are currently available in r/r MCL and if CAR T were unavailable, the standard of care would revert to R-BAC or similar, resulting in an estimated 81.9% reduction in LYs over two years for future patients
- **Limitations:** Model outputs are sensitive to the LTS assumptions applied (both the timepoint and the SM adjuster). The exploratory analysis assumes that by the time a comparable intervention is available, the cohort would not be well enough to receive it.

CONCLUSION

- Our results demonstrated that CAR T has delivered substantial benefits for r/r MCL patients within the NHS, underscoring the critical importance of MAAs for ensuring uninterrupted patient access to new therapies where appropriate alternatives are still missing

REFERENCES

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ABBREVIATIONS

CAR T: Chimeric antigen receptor T-cell, HC: historical controls, LTS: Long-term survivorship, LY: life year, MAA: managed access agreement, MCL: mantle cell Lymphoma, r/r MCL: relapsed/refractory mantle cell Lymphoma, NHS: National health services, PSA: probabilistic sensitivity analysis, R-BAC: Rituximab, Bendamustine and Cytarabine

DISCLOSURES

BD, EL, and CG are employees of Gilead/Kite, and hold shares in Gilead Sciences

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