Policy Brief: October 2026

Health Technology Assessment India (HTAIn)

Cost-effectiveness of Talicabtagene Autoleucel (Tali-Cel), Anti-CD19 Car-T Cell Therapy, for the treatment of Relapsed/ Refractory B-Cell Acute Lymphoblastic Leukemia in India

Postgraduate Institute of Medical Education & Research, Chandigarh

RECOMMENDATIONS

- ✓ At the current listed price of ₹26,00,000, Tali-cel is not cost-effective for the treatment of R/R B-ALL at the Indian cost-effectiveness threshold.
- ✓ While a price reduction of 45% would be desirable to make Tali-cel cost-effective, a reduction of 20%-45% (₹14,30,000-₹20,80,000) per patient may also be considered.
- ✓ More evidence should be generated on comparative long-term effectiveness of Tali-cel compared with allogeneic hematopoietic stem cell transplantation in patients with R/R B-ALL in India.

KEY FINDINGS

- ✓ Tali-cel yielded an additional 4.58-9.29 life-years and 3.84-7.61 QALYs per patient, at an additional lifetime cost of approximately ₹21–22 lacs per patient compared with the allo-HSCT (*range based on trial and real-world evidence respectively*).
- ✓ At current acquisition price of ₹26,00,000, the incremental cost per QALY gained ranged from ₹3,02,312 to ₹5,82,661.
- ✓ A price reduction of 20%-45%, corresponding to a value-based price of ₹20,80,000 and ₹14,30,000, would be required for Tali-cel to become cost-effective for treatment of R/R B-ALL patients in India.

BACKGROUND

- Talicabtagene autoleucel (Tali-Cel) is an indigenous anti-CD19 chimeric antigen receptor T-cell (CAR-T) therapy approved in India for relapsed/refractory B-cell acute lymphoblastic leukemia (R/R B-ALL).
- While it offers measurable clinical benefits, its high upfront cost raises questions regarding its affordability and value for money.
- We evaluated the cost-effectiveness of Inotuzumab ozogamicin (InO)-based immunotherapy followed by Tali-Cel compared with InO followed by allogeneic hematopoietic stem cell transplantation (allo-HSCT) in India.

PICO FRAMEWORK

for evaluating cost-effectiveness of CAR T-cell therapy among B-ALL patients in India

POPULATION	Adolescents and Young Adults (AYA) patients with relapsed or refractory B-cell acute lymphoblastic leukaemia (B-ALL) in the Indian context
INTERVENTION	Immunotherapy (Inotuzumab ozogamicin) followed by anti-CD19 chimeric antigen receptor T-cell therapy (Tali-cel)
CONTROL	Immunotherapy (Inotuzumab ozogamicin) followed by allogeneic stem cell transplantation
OUTCOME	Costs and health benefits in terms of life-years and quality-adjusted life-years

KEY MODEL INPUTS

CLINICAL EFFECTIVENESS INPUTS

COMPARATOR

Inotuzumab ozogamicin followed by haematopoietic stem cell transplantation (International randomised trial)

- **Source:** International randomised INO-VATE ALL trial
- **Data:** Progression-free survival (PFS) and overall survival (OS) curves over a **24-month time period.**

INTERVENTION

Chimeric antigen receptor T-cell therapy (talicabtagene autoleucel) (India-specific evidence)

- **Source:** India-specific clinical trial and real-world evidence
- **Data:** Progression-free survival (PFS) and overall survival (OS) curves over a **24-month time period.**

No head-to-head comparison was available globally or in the Indian context.

HEALTH-RELATED QUALITY OF LIFE INPUTS

Data source

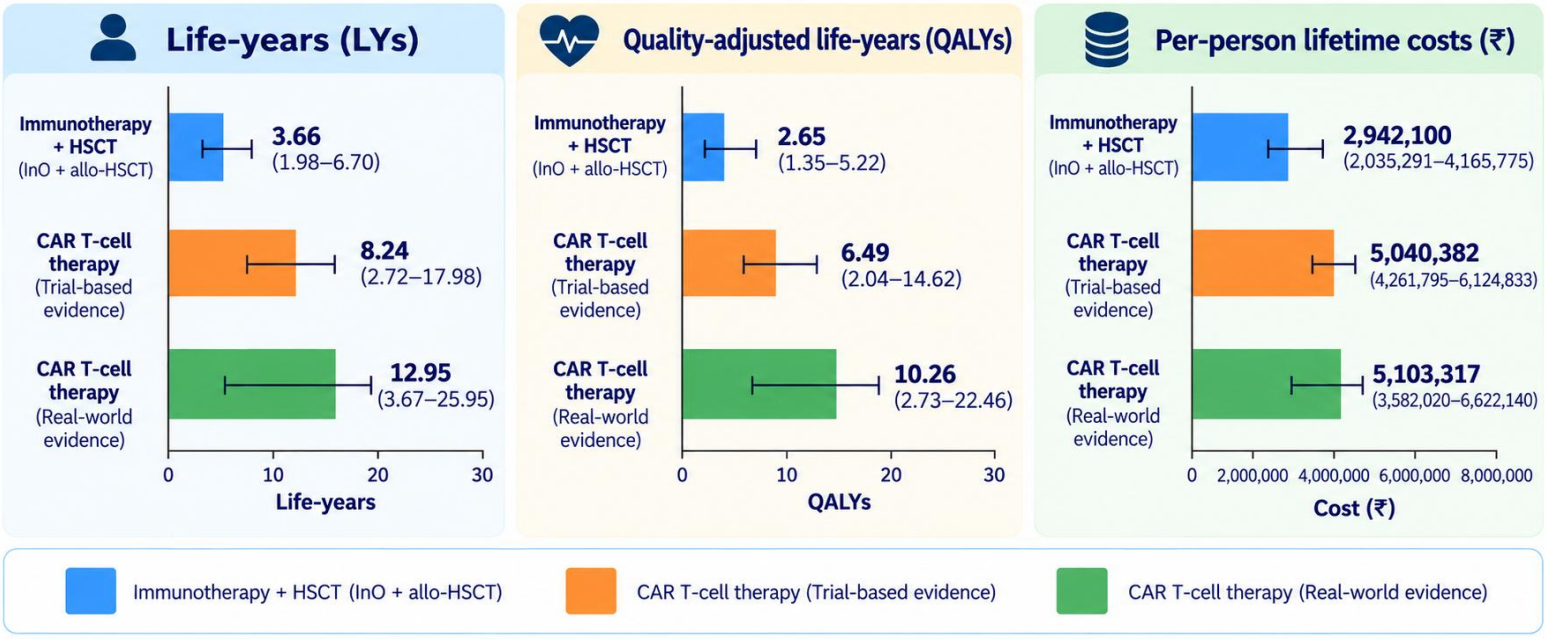
Cancer Database for Costs and Quality of Life (CaDCQoL) Study, India

- 300 acute lymphoblastic leukaemia patients across 6 Indian states
- Health-related quality of life estimated using EQ-5D-5L.
- Decrements in utility scores associated with disease progression and treatment-related adverse events have been accounted for in the model.

COST INPUTS

- **Drug acquisition and apheresis costs** — Market price (CAR T-cell product and apheresis)
- **Immunotherapy (inotuzumab ozogamicin)** — Market price
- **Lymphodepletion therapy** — PMJAY package rate
- **Supportive care costs** — Market price
- **Allogeneic transplant** — Market price; GVHD prophylaxis — PMJAY package rate
- **Diagnostic and laboratory test costs** — Rates from Central Government Health Scheme
- **Health system costs** — National Health System Cost Database
- **Out-of-pocket expenditure (OOPE)** — Cancer Database for Costs and Quality of Life (CaDCQoL) Study, India

MODEL OUTCOMES (PER PATIENT, LIFETIME)



COST-EFFECTIVENESS RESULTS: CAR T-CELL THERAPY VERSUS TRANSPLANT

Outcome	CAR T-cell vs Transplant (Trial-based evidence)	CAR T-cell vs Transplant (Real-world evidence)
Incremental LYs gained	4.58	9.29
Incremental QALYs gained	3.84	7.61
Incremental costs (₹)	2,098,282	2,161,217
ICER (₹ per QALY gained)	582,661	302,312
Probability of being cost-effective	22.5%	43.5%
Price reduction required for CAR T-cell therapy to be cost-effective	45%	20%
Value-based price (₹)	1,430,000	2,080,000

CONCLUSION

A 20%-45% reduction in the acquisition of price of CAR T-cell therapy may be considered to improve its cost-effectiveness and affordability in India, and to inform decisions regarding its inclusion in government-funded health insurance schemes.