2ND meeting of the European Research Consortium on ITP

NEW INSIGHTS INTO IMMUNE THROMBOCYTOPENIA

Paris Crowne Plaza Paris République

April 23-24, 2026

Bispecific antibodies and CAR-T cells: do they have a place in ITP?

Karolin Trautmann, University Hospital TU Dresden, Germany

Disclosures of Karolin Trautmann

Company name	Research support	Employee	Consultant	Stockholder	Speakers bureau	Advisory board	Other
Amgen	x					x	
Argenx						x	
Grifols	x				x	x	
Novartis	x				x	x	
Sanofi					x	x	
Sobi	x				x	x	

Clinical need in ITP

- Most patients respond to current therapies
- However: disease burden remains high
  -  Fatigue is common
  - Limited rates of sustained remission
  -  Majority require chronic therapy

Durable remissions remain uncommon 

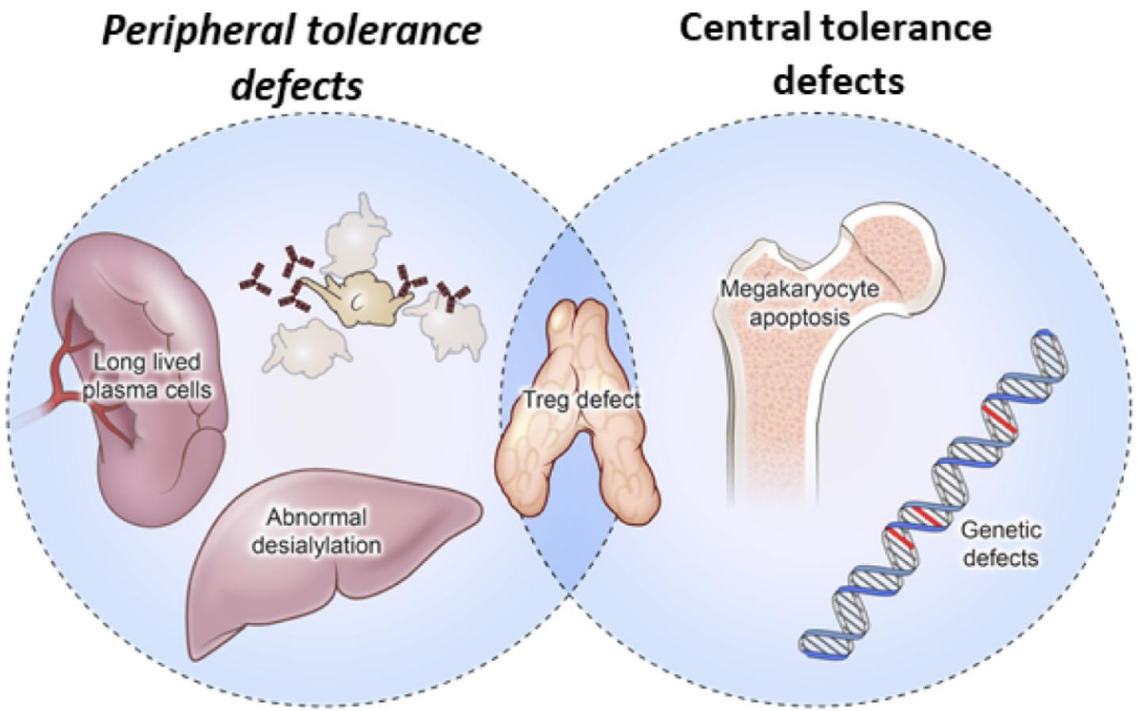
„Difficult to treat“ ITP

Relapsed/refractory ITP:

- Persistent thrombocytopenia with no response to ≧ 2 standard therapies
- High bleeding, infection, and thrombosis risk
- High morbidity and mortality
- Decreased HR-QoL

Moulis et al. 2024, Miltiadous et al. Blood 2020; Mahevas Blood 2016

Pathophysiology of „difficult to treat“ ITP



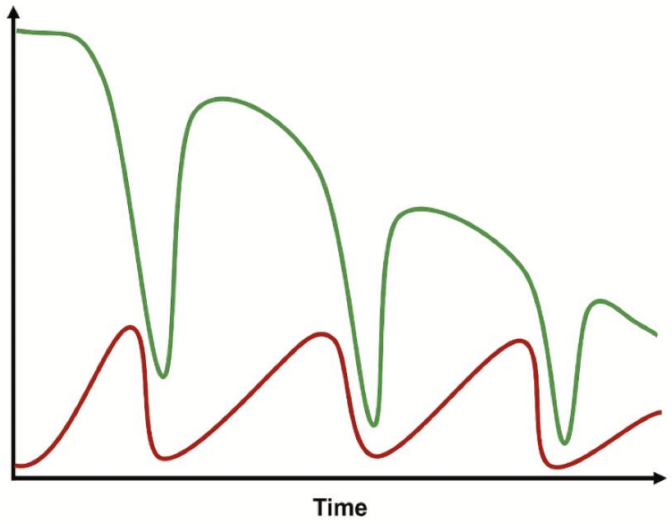
Need for an Immune Reset?

Chronic immune activation, B-cell driven autoimmunity and T-cell dysregulation

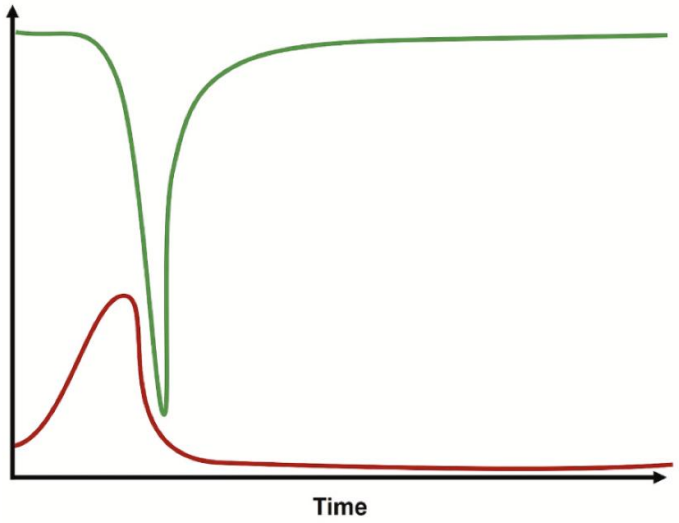
Picture from Panch et al. Hematology Am Soc Hematol Educ Program 2025

Immune reset versus chronic therapy in ITP

Chronic/repeated therapy



One time Intervention



Platelet stability
Disease activity

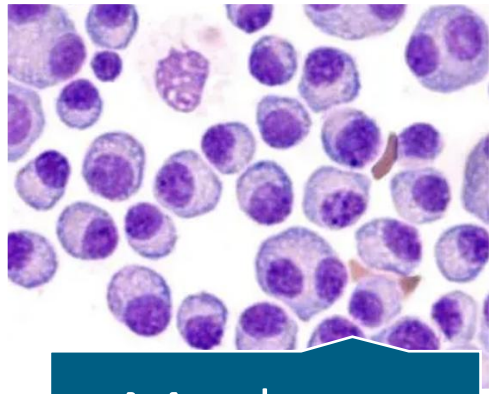
Goal: sustained remission without ongoing therapy

Adapted from Kuter et al Blood reviews 2026

CAR-T Cells + Bispecific Antibodies

ALL

Lymphoma



Myeloma

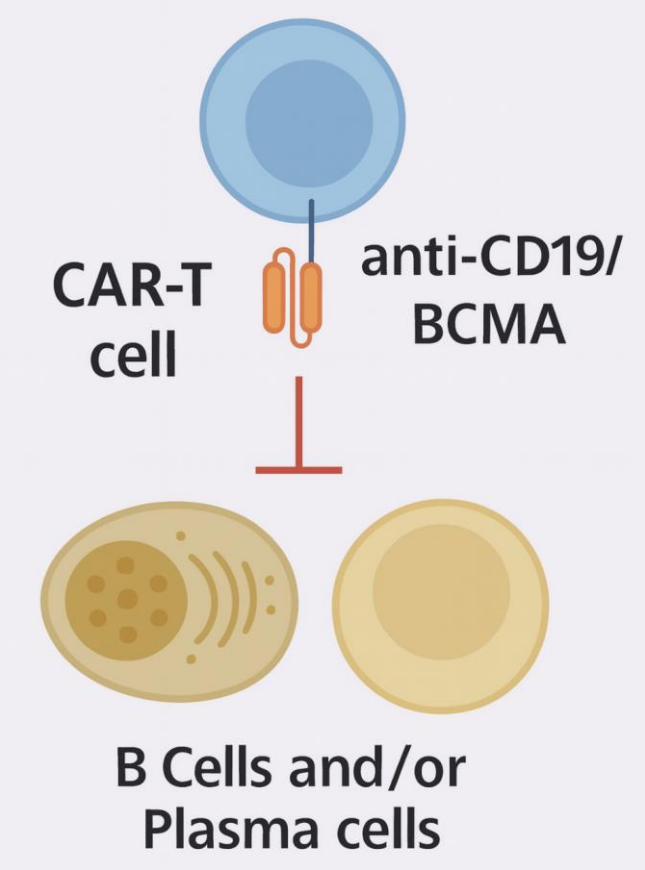
... established and approved for numerous hematologic malignancies

CAR-T: targeting B- and Plasma-cells

- Autologous T cells engineered to target B-cells/Plasma-cells

- Leads to:
  - Deep and sustained B-cell depletion (via CD19)
  - Depletion of long-lived plasma cells (via BCMA)
  - Reduction of autoantibodies

Potential for durable, treatment– free remission?



Picture from Mougiakakos et al. Blood 2025

CAR-T in ITP: clinical evidence

- Limited data using CD19/BCMA – directed CAR-T cells:
  - Several case reports[1,2,3,4] and small case series[5,6]

- Patient population: highly refractory ITP, multiple prior therapies

- Key findings
  - Rapid platelet recovery
  - Ability to discontinue background therapy
  - Low toxicity

Sustained responses
In heavily
pretreated ITP

[1]Trautmann-Grill et al. Lancet 2025, [2]Li et al. NEJM 2024, [3]Plümer et al. DGHO 2025, [4]Korte et al. Med 2026, [5]Li et al. Med 2026, [6]Shu et al. # 1267 ASH 2025

A typical „difficult-to-treat“ ITP patient

Male patient
*1989

07/2016	Prednisolon
08/2016	Rituximab
04/2018	Dexamethason
05/2018	Rituximab
07/2018	Romiplostim
02/2020	Prednisolon + Romiplostim
09/2021	Eltrombopag
11/2021	Fostamatinib
02/2022	Avatrombopag
05/2022	Avatrombopag + Fostamatinib
09/2022	Avatrombopag + Mycophenolatmofetil
11/2022	Splenectomy
12/2022	Romiplostim
02/2023	Romiplostim + Rituximab
03/2023	Fostamatinib + Romiplostim
09/2023	Hydroxychloroquin + Romiplostim
11/2023	Ciclosporin A + Romiplostim

B-Cell depletion
TPO rezeptor agonist
Fostamatinib
Immunsuppression
Splenectomy

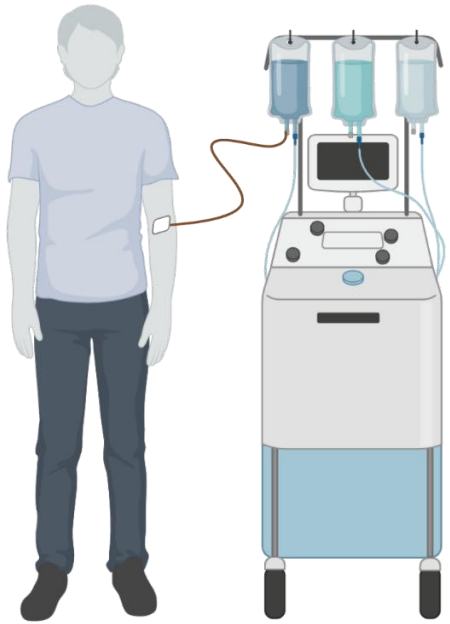
frequent rescue treatments required (IVIG, steroids)

Decision to proceed with CART

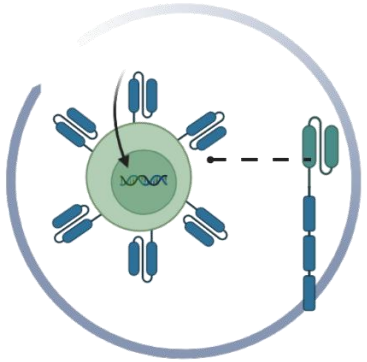
Trautmann-Grill et al. Lancet 2025

CAR-T Therapy: a complex, multi-step process

autologous leukapheresis

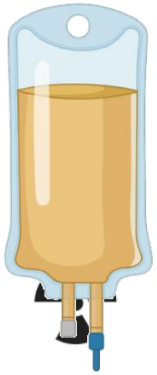


CAR-T - engineering
CAR-T - expansion



anti-CD19 CAR
KYV-101
(Kyverna Therapeutics)

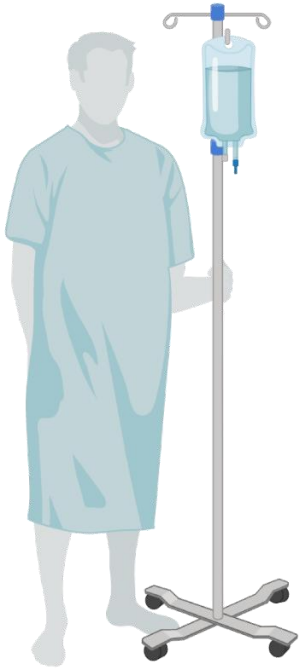
Lymphodepletion



Flu (30 mg/m^2 d -5 bis -3)
Cy (300 mg/m^2 d -5 bis -3)

CAR-T- infusion

1×10^8 CAR-Ts



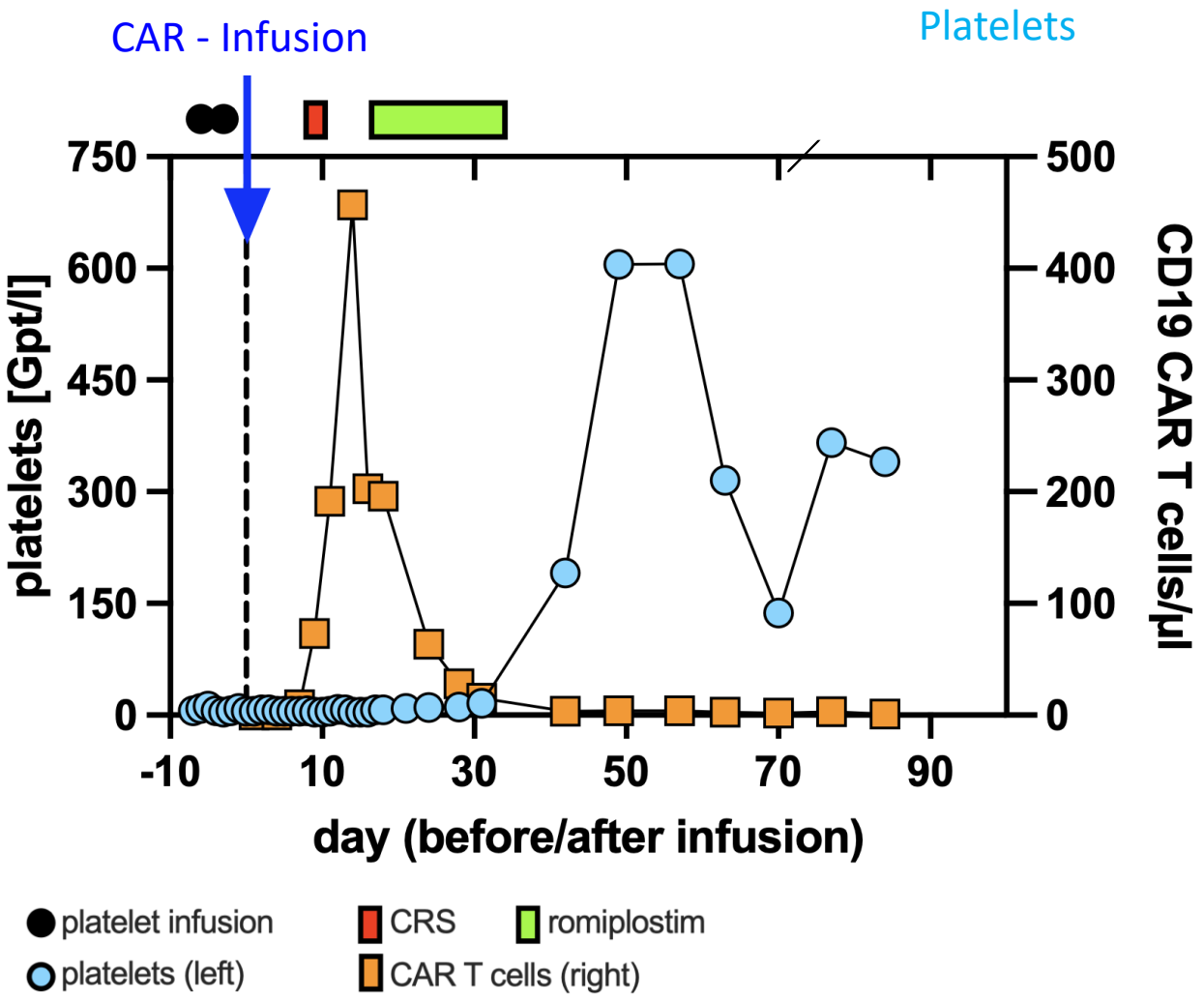
Trautmann-Grill et al. Lancet 2025

Clinical course after CAR-T

Complication:
Cytokine Release Syndrom Grade I

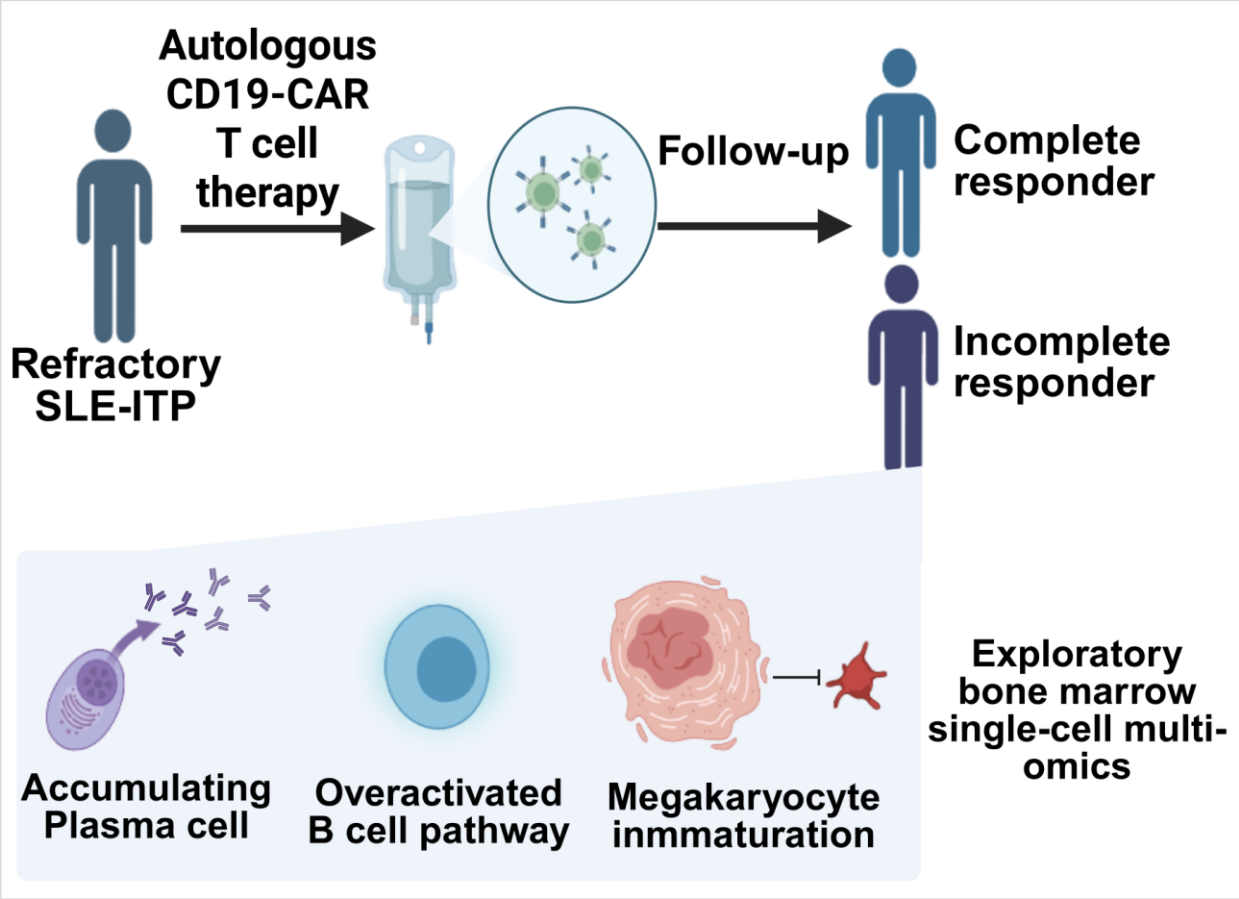
Day +12: B-cell reconstitution (177/ul)
Day +18: Hospital discharge
Day +42: Complete remission
(platelet count > 100 x10^9/l)

04/2026: Ongoing complete remission



Trautmann-Grill et al. Lancet 2025

CD19+ CAR-T in SLE-ITP (n=6): proof of concept



Safe and effective in SLE-ITP

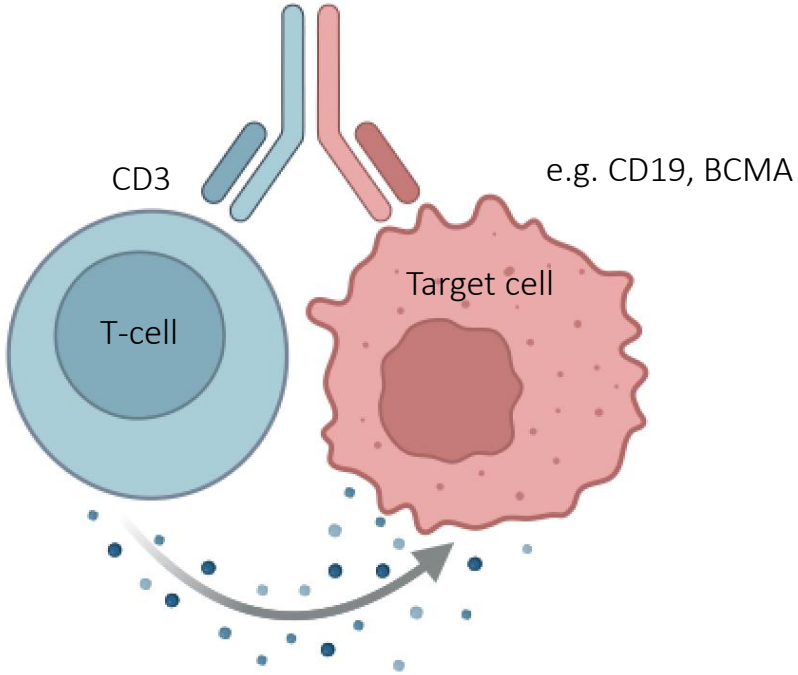
All patients responded (n=6)

Incomplete reponse (n=2) linked to residual plasma cells and impaired platelet production

Li et al. Med 2026

Bispecific antibodies: redirecting T cells

- Engineered off-the shelve antibodies
- Bind two targets:
  - CD3 (T cells)
  - Target cells (e.g. B-/ Plasma-cells)
- Redirect T cells to eliminate target cells



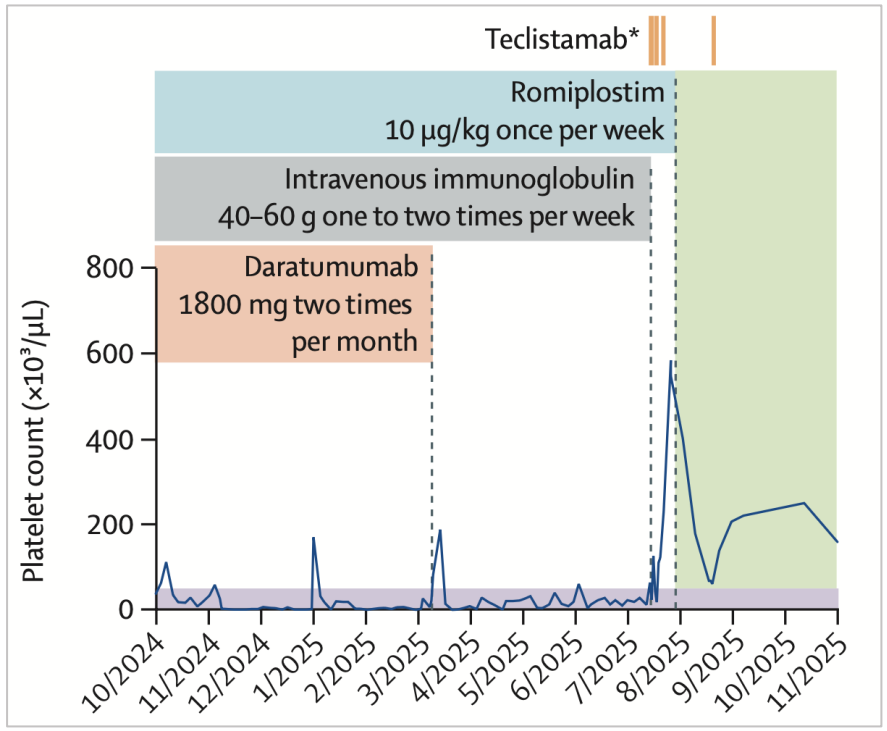
Off-the-shelf immune therapy

Bispecific antibodies: clinical evidence in ITP

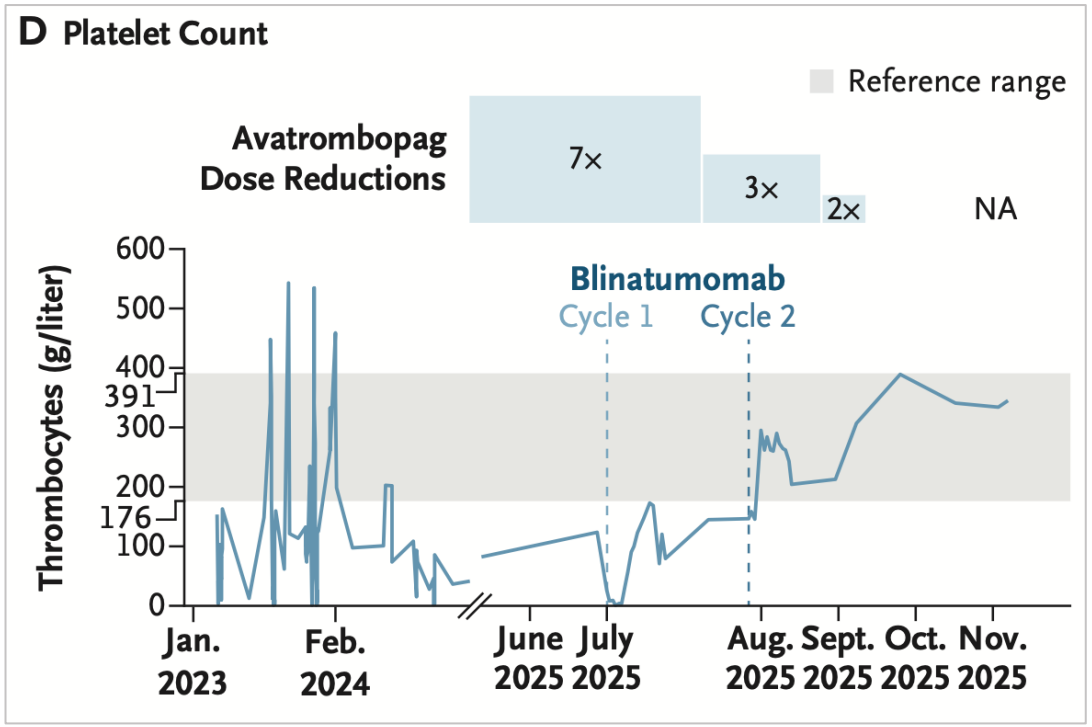
- Very limited data in refractory ITP
  - Case reports: Blinatumumab/Teclistamab[1,2]
  - Case series in other autoimmune diseases[3,4]
- Key finding
  - Deep B-cell depletion and rapid platelet response
- Shorter follow up compared to CAR-T

[1] Duque-Afonso et al. Lancet 2026, [2] Gottschlich et al. NEJM 2026, [3]Bucci et al. NEJM 2025, [4]Zhang et al. NEJM 2025

Bispecific antibodies: responses with very limited exposure



4 doses of Teclistamab (BCMA)[1]



2 cycles of Blinatumumab (CD19)[2]

[1] Duque-Afonso et al. Lancet 2026, [2] Gottschlich et al. NEJM 2026

Bispecifics vs. CAR-T: differences

	Bispecific antibodies	CAR-T cells
Availability	Off-the-shelf Ability to retreat	Patient-specific, complex manufacturing and administration
Depth of immune intervention	Depending on dosing	Deep
Toxicity	Moderate to high (CRS, infections, mitigated by time limited use)	High (CRS, ICANS), infections, long-term effects of genetic modification unknown
Evidence in ITP	Very Limited	Limited

Clinical trial overview

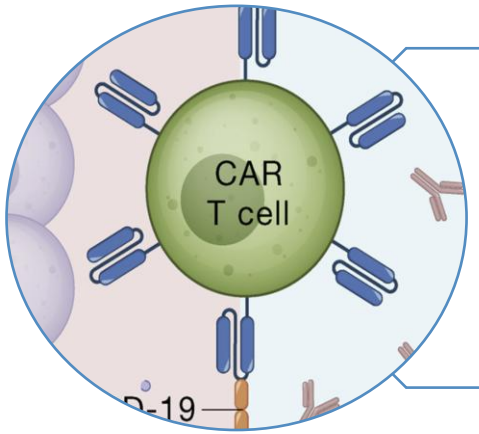
- ITP
  - CAR-T: n = 12
  - Bispecifics: n = 2
- Other autoimmune conditions
  - CAR-T: n = 238

    Including 4 Phase III trials
  - Bispecifics n = 10 (Phase I/II)

CAR-T ahead of bispecifics

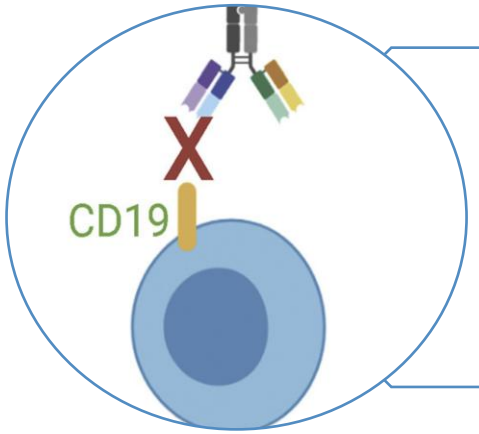
Source: www.clinicaltrials.gov

Bispecifics vs. CAR-T: where do these therapies fit in ITP?



CAR-T

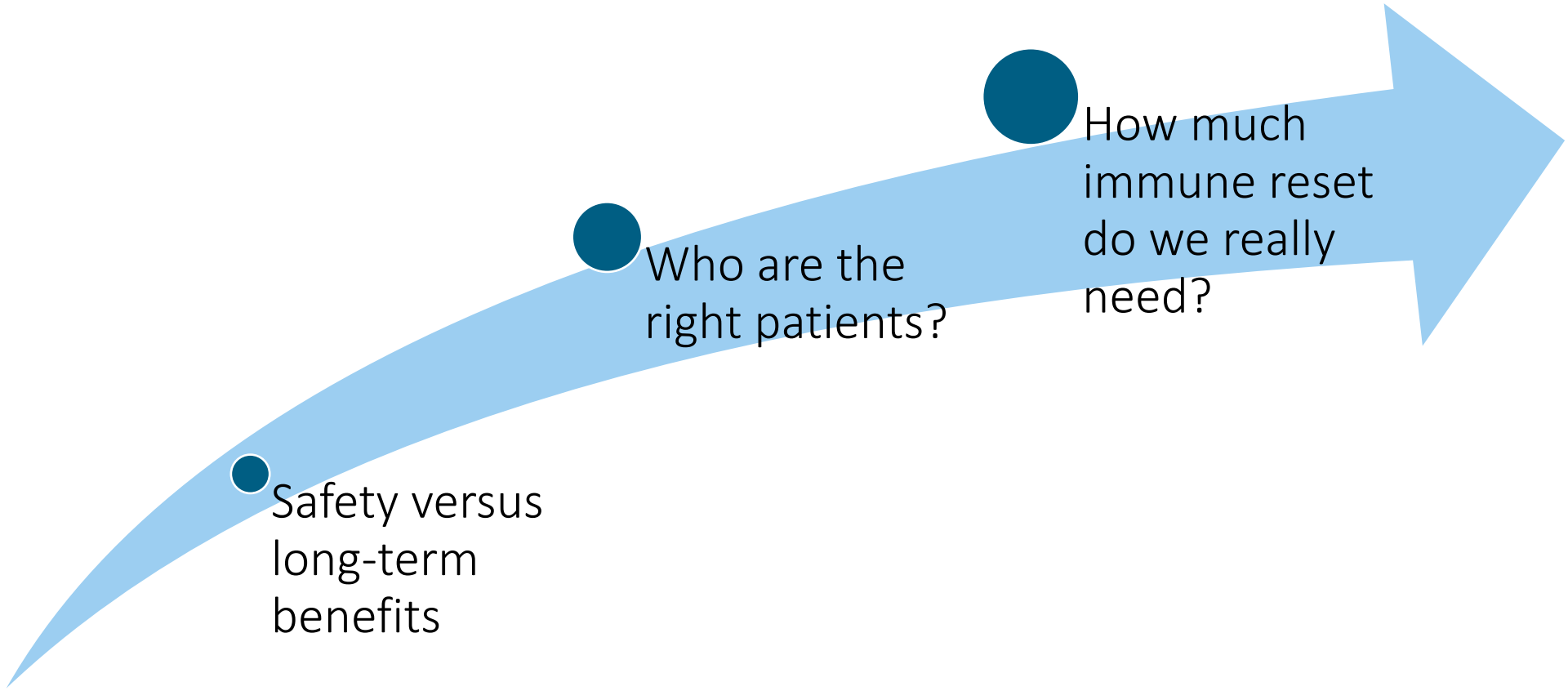
- "Difficult to treat" ITP
- Attempt at treatment free remission



Bispecific Antibody

- Earlier lines
- Adjustable dosing offers alternative to chronic therapy

Open questions for CAR-T and Bispecifics



Conclusion

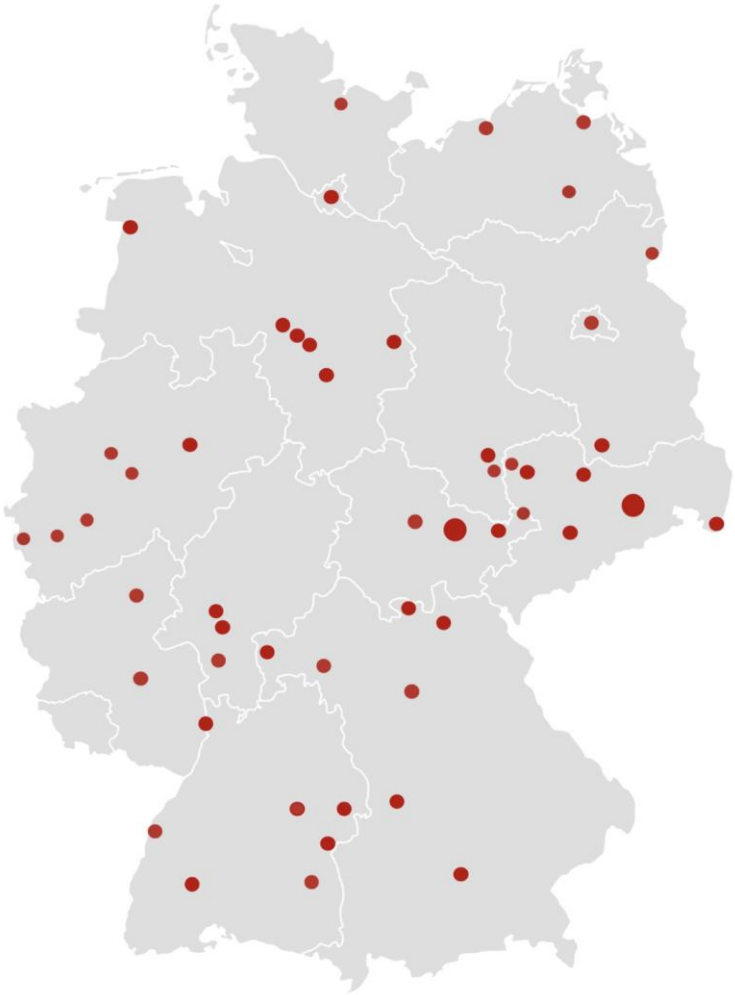
- CAR-T and bispecifics: new therapeutic era in ITP
- First evidence for treatment free remission
- Clinical data still limited
- Patient selection is key

CAR-T and bispecifics do have a place in in ITP – but for whom and when?

Thank you

My team and our patients

All supporters of the German ITP Registry



DEUTSCHES IMMUNTHROMBOZYTOPENIE REGISTER

AMGEN

argenx

NOVARTIS

GRIFOLS

sanofi

sobi rare strength

Questions?