



Society for Immunotherapy of Cancer

Improving risk profile of adoptive cellular therapy

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Improving risk profile of adoptive cellular therapy

Participants:

- Brian Friend (Texas Children hospital)
- Connie Sommers (NCI)
- Helen M Hera
- Kevin Aviles (Immatics Inc.)
- Lei Lei Shi (MD Anderson)
- Xiuyan Wang (Memorial Sloan Kettering)

Efficacy

Risk



Toxicity



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Efficacy

Risk



Toxicity



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Efficacy

Risk



Toxicity



Topics discussed

- Patient selection
- Screening for antigen
- Construct design
- Manufacturing cells
- Cells administration
- Toxicity recognition
- Toxicity treatment
- Monitoring risk long-term
- Relapse management
- Ethical considerations



Selection and Screening

Patient selection

- Too late in the disease process
- Comorbidities
- Prior multiple lines of therapies
- Polypharmacy
- Autoimmune diseases
- Dietary supplements
- Fecal transplant

Antigen screening

- Which tissue for screening for antigen selection
- Biopsy timing



Construct design and vector selection

Construct design

- Target antigen selection
- ScFv – murine versus human
- CAR affinity
- Costimulatory design and potency
- Dual antigen targeting
- Mechanism of antigen recognition
- Suicide switch (? In case of dual antigen targeting)

Vector selection

- Insertional mutagenesis
- Vector copy number
- Autologous Vs. Allogeneic



Manufacturing and Administration

Manufacturing

- Culture time
- Additive cytokines
- Selection of cellular subproduct
- Transduction to other immune cells
- Off-the-shelf
- Concerns of **using only one** method / product / company
- Minimal assays for release

Administration

- Outpatient administration
- Preconditioning regimens
- Starting dose and dose escalation
- Point of care delivery of autologous product



Treatment of toxicities

Toxicity recognition

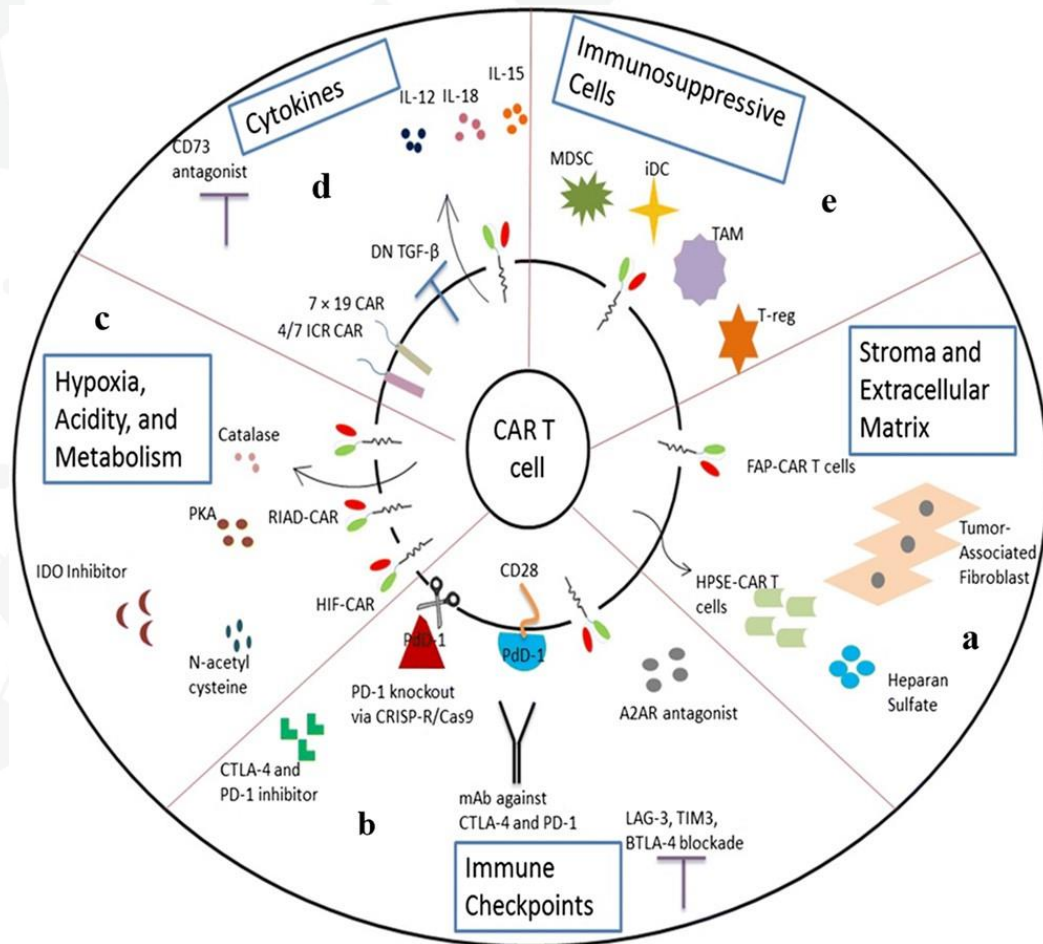
- Risk mitigation and evaluation programme
- Early recognition
- On-target, off-tumor toxicity
- Who should evaluate
- Late toxicity documentation

Toxicity treatment

- Toxicity assessment and definition
- Early intervention of toxicity



Overcoming solid tumor immunosuppression



- Combination therapies to overcome immunosuppression and the associated risks
- How do one assign a risk / adverse event to a specific therapy in combination therapies

Treatment monitoring and relapse management

Treatment monitoring

- Progression versus pseudo progression

Relapse management

- Multiple doses
- Sequential antigen targeting
- Overcoming immune suppression

- Ethical considerations



Didn't we go through this path already?



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Didn't we go through this path already?

Infectious diseases and antibiotics



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Thank you



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