Cell therapies: Challenges within a European Context
Programme

• Introduction: cellular therapies, living drugs
  Peter Vandenberghe, UZ Leuven/KULeuven

• Cell therapy manufacturing, an industrial view within the European context
  Wilfried Dalemans, formerly at Tigenix, GSK, Transgène

• Experiences with cell therapy in oncology, including regulatory and ethical aspects
  Barbara De Moerloose & Bart Vandekerckhove, UZ Gent/ Ugent)

• From cell suspension to living implant, clinical translations in regenerative medicine
  Frank Luyten, UZ Leuven/KULeuven

• Panel discussion
  speakers + N. Cools (UA/ UZA), Ivan Van Riet (UZB/VUB)
The engineering of living organisms is not yet changing everything. Give it time.

Oliver Morton
Hematopoietic Stem Cell Transplantation: a hematopoietic rescue operation
Graft-versus-leukemia effect: more potent than myeloablative chemo-/radiotherapy
Allogeneic stem cell transplantation for AML/ ALL

RAPID COMMUNICATION
Donor Leukocyte Transfusions for Treatment of Recurrent Chronic Myelogenous Leukemia in Marrow Transplant Patients

By H.J. Kolb, J. Mittermüller, Ch. Clemm, E. Holler, G. Ledderose, G. Brehm, M. Heim, and W. Wilmanns
Chimeric Antigen Receptor T-cells

First generation CAR

Labanieh L et al. Nature Biomedical engineering. 2018:2; 377-391
Costimulation: signal 1 + signal 2

Labanieh L et al. Nature Biomedical engineering, 2018:2; 377-391
Patient journey

Apheresis unit

Hospitalisation unit

Stem cell lab

Pharmacy

Stem cell lab

Pharmacy

EMA

Clinical (GMP) cell-manufacturing facility

Pharma company

Activate T cells

Engineer T cells with virus encoding CAR

Expand CAR T cells

Harvest CAR T cells

Patient journey

R/R DLBCL → Leukapheresis → Bridging → Conditioning → Infusion → Follow-up

Bridging a living drug
Targeted therapy

Immune cell therapy