Regulatory T Cells (T regs)

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Regulatory T Cells
T regs

are
CD4 positive
CD25 positive
They also express FOXP3
It is a Transcription factor
Forkhead Box P3
(FOX P3)

Old term was
Suppressor T Cells

They prevent Autoimmunity

Peripheral tolerance to self antigens

Biomarkers expressed are
CD4
CD25
FOX P3

TGF Beta is essential for
Reg T Cells to diiferentiate to Naive CD4 Cells

Modulation of T reg Cells can be used in the treatment of
1 Cancers
2 Autoimmune Diseases
3 wound healing
4 to facilitate Organ Transplant

Regulatory T Cells are increased in
1 infections
HIV
TB
Malaria
Leishmaniasis

2 Regulatory T Cells are dysfunctional in
Amyotrophic lateral Sclerosis
Low FOXP3

3 Pregnancy
Regulatory T Cells are increased during normal pregnancy
They protect the fetus from maternal Immune response
In pre eclampsia Reg T Cells are reduced in number

4 Cancers
Increased number of Regulatory T Cells in solid cancers like breast cancer. colorectal cancer. Ovarian cancer and Non Hodgkins Lymphoma

5 genetic deficiency of the gene encoding FOXP3 in humans and mice
Patients develop fatal severe Autoimmune duseases
IPEX Syndrome
Immune dysregulation
Polyendocrinopathy
Entetopathy
X linked

IPEX
Autoimmunity in the first year of life
Watery Diarrhoea
Eczema , dermatitis
Endocrinopathy
Insulin Dependent Diabetes Mellitus
Coombs positive Hemolytic Anemia
Autoimmune thrombocytopenia
Autoimmune Neutrogena
Tubular nephopathy
The males die in the first year of life due to sepsis

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