Landmark Trials:

Induction in Renal Transplantation

Thiabudin et. al.

Anti-thymocyte globulin vs. Placebo

Lowered incidence of biopsy-proven acute rejection episodes and increased 1 year graft survival.

Goggins et al.

Intraoperative vs. Post-operative Thymoglobulin

Intraoperative thymoglobulin showed decreased delayed graft function.

Brennan et al.

Rabbit ATG vs Basliximab

The use of rabbit ATG led to lower rejection with slightly worse infections compared to Basliximab in patients at high risk for rejection. Both groups had similar graft loss and delayed graft function.

Noel et al.

Anti-thymocyte globulin vs. Daclizumab

Thymoglobulin patients had lower incidence of biopsy proven acute and steroid-resistance rejection in 1 year. Otherwise, similar graft and patient survival.

Hanaway et al.

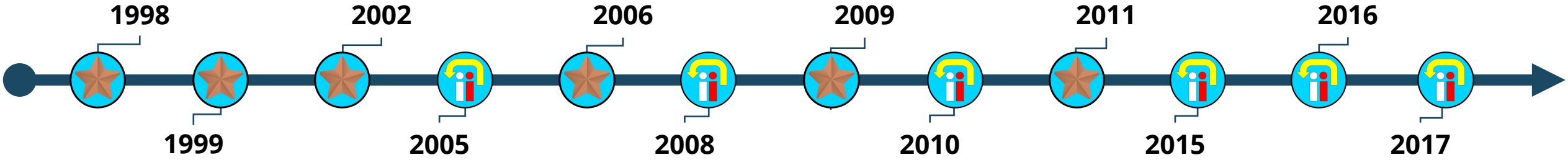
The INTAC study

Using Alemtuzumab in high-risk patients vs conventional therapy led to significantly lower rejection rates at 6 and 12 months, but did show higher late rejection rates, incidence of cancer-related adverse events, and infections.

Kucirka et al.

Induction in HIV

Use of induction therapy was associated with lower rates of delayed graft function, lower infection, graft loss & lower mortality in HIV patients. ATG induction was better than IL2RA in rejection rates.



Brennan et al.

Thymoglobulin vs ATGAM

Rabbit anti-thymocyte globulin (thymoglobulin) patients had fewer rejection rates and adverse events vs equine antithymocyte globulin (ATGAM).

Kaufman et al.

Alemtuzumab vs Basiliximab induction

Alemtuzumab induction was similar to Basiliximab in efficacy in steroid-free maintenance protocol

Gurk-Turner et. al.

Thymoglobulin dose optimization

Evaluated the effect of total rabbit ATG on graft outcomes. There was no difference in graft survival of groups with > or <7.5 mg/kg.

Cochrane review: IL-2 Receptor □ (IL2RA)

IL2RA vs placebo with reduced acute rejection in IL2RA recipients, however no change in graft loss/rejection vs. ATG recipients. ATG patients also had 75% increase in malignancy + 32% increase in CMV disease vs. IL2RA recipients.

Saull et al.

Alemtuzumab vs ATG with steroid withdrawal

One year acute rejection rates were similar between the alemtuzumab and ATG groups; however, rejection Banff IA and higher was more common in the alemtuzumab arm.

Cochrane review: Polyclonal/monocloal Ab

ATG reduced acute graft rejection by 37% but has uncertain effects on death, graft survival, malignancy, new onset diabetes, increased CMV infection. ATG & Alemtuzumab decrease rejection at cost of increased CMV infections.