

## **Cultured Epidermal Autograft Fact sheet:**

- Skin can be successfully transplanted from one person to another (allografts)
- Skin can also be transplanted from other species (xenografts) but this has its own drawback, since animal products cannot be labelled as 100% biologically safe.
- Both allografts and xenografts are temporary skin covers, usually rejected after 2 to 4 weeks.
- No skin bank existed in South Africa (therefore no regular supply of skin donations from donors).
- Xenografts only became available in South Africa in June 2014
- The first successful Cultured Epidermal Autograft (CEA) was used successfully in USA in 1975 (Rheinwald and Green).
- The Pippie Kruger case alerted the South African public to the existence of cultured epidermal autografts where the patient's own skin can be externally cultured in laboratory conditions.
- Epicel (the commercial CEA product) became unavailable in South Africa since October 2014. Epicel is cultured in a laboratory. First a matrix is grown, irradiated, and human cells are cultured "on top" of that.
- While this marked a great advance, the option is an expensive route and thus was only used by exception in developing countries, and very selectively in first world countries.
- Dr Kleintjes' technique achieves the same results as Epicel, but is produced easily and cost effectively. No animal-derived product is used, also no irradiation.
- No immunosuppression is necessary as it is the patient's own skin.
- On day 14, enough skin had grown to be placed onto all raw wounds.
- Wounds were opened seven days later with good graft take – in fact better than the largest Cultured Epidermal Autograft series documented in literature.
- The first operation was done as an emergency life-saving intervention with consent from hospital ethics committee.
- Full application was made to Stellenbosch University's Health Research Ethics Committee in 2014 to request that the procedure be extended to help other patients
- A protocol submission is being prepared for a PhD study.