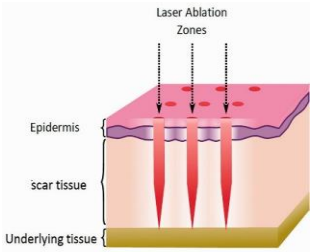
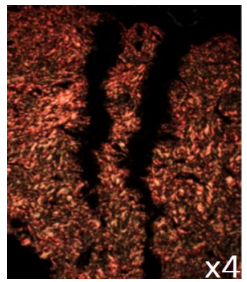
Early Treatment of Hypertrophic Burn Scars in Paediatric Patients

- Ablative fractionated CO_2 laser ($AFCO_2L$) was introduced to the WA paediatric state burns service in 2014
- A relatively new modality for treating burn scars, it offers a reduced risk profile compared with other reconstructive surgical procedures
- $AFCO_2L$ creates micro-fenestrations in scar and molecular and structural changes to collagen
- Undamaged columns of skin between micro-treatment zones (MTZ's) allow for rapid re-epithelialisation, reducing risks of infection, dyspigmentation and poorer scarring which were high in unfractionated laser treatment
- In patients with very early active burn scars despite standard scar management, we believe that timely treatment with $AFCO_2L$ may impact scar formation





Case 1

- 2y boy with 23% TBSA mixed depth boiling water scald burn and delayed 1st aid
- Treated with dermabrasion, ReCell and SSG on day 3 and day 9
- At 9 months post-injury his scarring was still very active and he received a total of four CO_2 laser treatments

Prior to laser

Case 2

- 13y boy with <0.5% TBSA partial thickness contact burn from a motorbike exhaust to right cheek and shoulder. 1st aid given
- Treated with dermabrasion and ReCell on day 3
- At 6 weeks post-injury his scar was very hypertrophic
- $AFCO_2L$ treatment was commenced at 5 months post injury and he received a total of four laser treatments.

Prior to laser

Authors: Yap C, Douglas H, Wood F, Rea S: State Burns Unit WA, Princess Margaret Hospital, Perth, Western Australia