Conclusion
Use of ACHD to produce an autologous skin cell suspension alone and in combination with STSG (current management) reduces hospital costs and length of stay (LOS) for burns (TBSA >10%) in the US.

Significance Statement
- A health economic model of the US burn care pathway was developed to project the economic value of new burn care interventions versus standard of care. This is a valuable tool due to substantial burn management costs.
- This study projects costs and clinical outcomes to assess cost-effectiveness and burn center budget impact for using current management (STSG) vs management including ACHD to treat deep-partial thickness (DPT) and full-thickness (FT) burns, respectively, for adults with TBSA >10%.

Data Sources and Results
- The hospital-perspective model uses sequential decision trees to depict the acute burn care pathway. There are four key distinct phases: wound assessment, debridement/excision, temporary coverage and permanent closure.
- Clinical inputs are randomized controlled trials, burn surgeon surveys and interviews, and the ABA National Burn Repository (NBR). Costs were from 3 burn hospitals.
- Not considering the cost of the device, treatment with an ACHD was cost-saving for all burn patient profiles. For a hypothetical burn center with 200 patients reflecting NBR adult characteristics TBSA 10-60%, savings were projected to exceed $12.9M (30%).

Lessons Learned
- Overall, RECELL® ACHD reduces costs associated with current treatment, particularly for greater TBSA burn injuries and DPT requiring autografting.
- Savings reflect decreased LOS, number of autograft surgeries, donor site size and associated wound care, and reduced rehabilitation needs.
- Real-world data for the US would improve future analyses. Costs and procedure data from more burn centers would also increase generalizability.

Co-authors and Affiliations
Kevin Foster, MD, MBA, FACS (Arizona Burn Center); Pinar Bilir, MS (IQVIA), Eliza Kruger, MHEcon (IQVIA); Stacey Kowal, MS (IQVIA); William Hickerson, MD, FACS (University of Tennessee Health Science Center); James H. Holmes IV, MD, FACS (Wake Forest University Baptist Medical Center); Scott Nystrom, PhD (Department of Health and Human Services [DHHS]); Danielle Turley, PhD (DHHS); Jeremiah Sparks, MBA (Avita Medical); Narayan Iyer, PhD (DHHS); Andrew Quick, MS (Avita Medical)