

# Real World Treatment Trends for Patients Total Body Surface Area (TBSA) ≤ 20%: Evaluating Important Shifts in Care and Budget Impact of Autologous Stem Cell Suspension (ASCS) Adoption

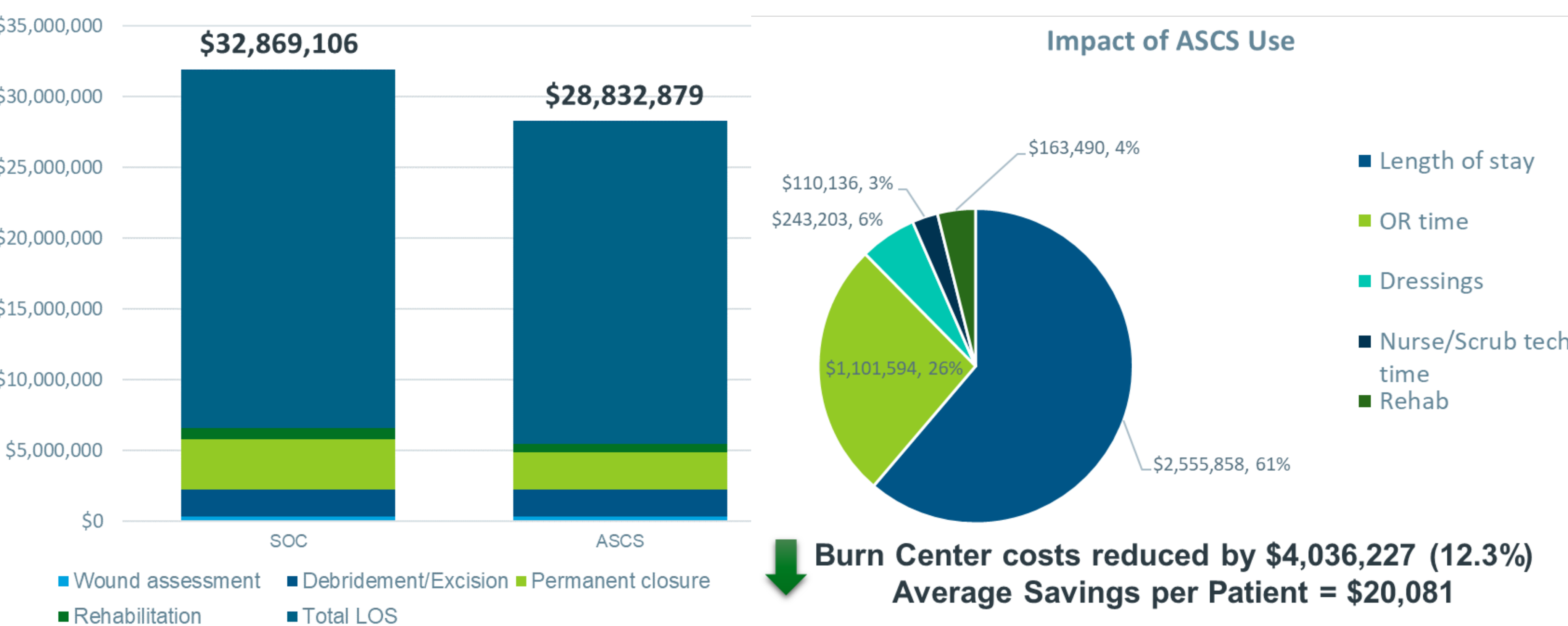
## Conclusion:

Using real world data, the impact of ASCS use in patients with TBSA of burn ≤ 20% is projected to be cost saving to burn centers given reductions in costs, LOS and number of permanent closure procedures

Table 1. Key survey results and inputs for BEACON health economic analysis

Key Burn Center Costs		\$
Avg cost for burn patients <i>per day</i>		\$7,554
Avg burn surgery operating room (OR) cost <i>per hour</i>		\$4,844
Avg cost of anesthesiology <i>per patient</i>		\$4,705
	Patient distribution (N)	Resource Utilization
TBSA ≤20%	201	
Full-thickness/Mixed depth burns	60 (30%)	<ul style="list-style-type: none"> <li>Avg number of autograft procedures: 1.7</li> <li>Avg surgical time (<i>minutes per TBSA</i>) for graft site: 5.5</li> <li>Avg surgical time (<i>minutes per TBSA</i>) for donor site: 2.8</li> </ul>
Deep-partial thickness burns	56 (28%)	<ul style="list-style-type: none"> <li>Avg number of autograft procedures: 1.5</li> <li>Avg surgical time (<i>minutes per TBSA</i>) for graft site: 5.1</li> <li>Avg surgical time (<i>minutes per TBSA</i>) for donor site: 2.7</li> </ul>

Figure 1. Total budget impact of ASCS use in TBSA ≤20% burns (201 patients)



## Significance Statement:

- The study provides insights into current real-world practice patterns for small TBSA burns, compared to the NBR v8.0, and also provides a more granular understanding of key practice patterns
- Estimated trends of reduced total costs remain consistent when using current real world data on practice patterns and provider costs for lower TBSA burns

## Data Source/Population and Results:

- A survey was administered to a representative sample of 14 U.S. burn centers focused on patients with TBSA ≤ 20% burns
- New practice pattern data collected included: burn center characteristics (patient mix in terms of age, TBSA and burn depth); burn patient characteristics, key provider costs (bed day, anesthesia) and resource use (operating room (OR)/surgery time, length of stay (LOS), dressing changes etc.)
- Updated SOC costs and outcomes were integrated into the BEACON<sup>1</sup> health economic model to generate updated estimates on the impact of ASCS use in TBSA ≤ 20% patients
- Compared to initial findings based on NBR v8.0, a larger proportion of low TBSA burn patients were admitted with FT/DPT burns but resource use (including number of STSG procedures) was lower
- Based on an average sample of 201 low TBSA patients in all burn centers in the US, use of ASCS (relative to STSG), is projected to provide annual provider cost savings of approximately \$4M (12.3%), largely due to expected decreases in LOS

## Lessons Learned:

- Using updated, real-world survey data in BEACON, projections of the estimated impact of ASCS use were consistent with previous NBR-based estimates for patients with TBSA of burn ≤ 20%
- Notable shifts in care since NBR v8.0 include fewer autografting procedures per patient for SOC but a more severe patient mix (higher DPT/FT burns) being treated inpatient
- Considering current practice patterns, ASCS use has the potential to reduce resource consumption and LOS and related burn center costs relative to SOC

<sup>1</sup>Kowal S et al. Cost-Effectiveness of the Use of Autologous Cell Harvesting Device Compared to Standard of Care for Treatment of Severe Burns in the United States. *Adv Ther.* 2019 Jul;36(7):1715-1729.