

## COMPARISON OF THE ABBREVIATED BURN SEVERITY INDEX (ABSI) SCORE SYSTEM WITH THE REVISED BAUX SCORE ON THE PREDICTION OF MORTALITY OF BURN PATIENTS IN DR SARDJITO HOSPITAL

Zakariya Aji Parminto<sup>1</sup>, Ishandono Dachlan<sup>2</sup>, Sumadi Lukman Anwar<sup>3</sup>

Surgery Departement<sup>1</sup>, Plastic Surgery Subdivision<sup>2</sup>, Oncology Surgery Subdivison<sup>3</sup>

Faculty of Medicine, Public Health and Nursing Medicine, Gadjah Mada University – Dr. Sardjito Hospital, Yogyakarta

### Abstract

**Background :** Burns can have an impact on the patient's physical and psychological condition, which can cause pain, affect mental health, quality of life, ability to work and increase mortality. While epidemiological studies are critical to resource allocation and burn prevention, the data available vary widely. The majority of the data comes from high-income countries and relates to access to health facilities, environmental differences and health care system resources.

**Method :** This study is a quantitative descriptive with a Cohort retrospective study design. 135 samples of patients with burn diagnosis were obtained from data withdrawal at ICM RSUP Dr. Sardjito for the period of January 2019 to December 2022. This study compares mortality outcomes from the ABSI scoring system and the Revised Baux scoring system. Accuracy tests were performed with ROC-AUC analysis and influence tests using regression logistic tests.

**Results :** 102 samples of HIV burn patients were obtained with 77 subjects having ABSI scores of less than  $< 8$ , and as many as 25 subjects having ABSI scores of  $\geq 8$ . There were 53 patients included in the RBS score group  $\leq 60\%$  and the remaining 49 patients entered the RBS score group  $> 60\%$ . Then an analysis was carried out using the AUC (Area Under The Curve) – ROC (Receiver Operating Characteristic) curve, it was found that the ABSI score had a wider curve on the ROC, namely with an AUC of 0.834 while the revised Baux score had an AUC of 0.819.

**Conclusion :** From this study we conclude that the ABSI score had a high accuracy ability in predicting mortality compared to the Revised Baux score. The difference in the scoring components in the two scores is one of the causes of the difference in the level of accuracy of the two scoring systems

**Keyword :** ABSI, Revised Baux, burn injury scoring and burn mortality prediction.

## PERBANDINGAN SISTEM SKOR *ABBREVIATED BURN SEVERITY INDEX* (ABSI)

### DENGAN SKOR BAUX REVISI TERHADAP PREDIKSI MORTALITAS PASIEN

### LUKA BAKAR DI RSUP DR SARDJITO

**Zakariya Aji Parminto<sup>1</sup>, Ishandono Dachlan<sup>2</sup>, Sumadi Lukman Anwar<sup>3</sup>**

Departemen Ilmu Bedah<sup>1</sup>, Sub Divisi Bedah Plastik<sup>2</sup>, Sub Divisi Bedah Onkologi<sup>3</sup>

Fakultas Kedokteran Kesehatan Masyarakat dan Keperawatan Universitas Gadjah Mada – Dr. Sardjito Hospital, Yogyakarta

#### **Intisari**

**Latar Belakang :** Luka bakar dapat berdampak pada kondisi fisik maupun psikologis pasien, dimana dapat menyebabkan rasa sakit, memengaruhi kesehatan mental, kualitas hidup, kemampuan untuk bekerja hingga meningkatkan mortalitas. Walaupun studi epidemiologi sangat penting bagi alokasi sumber daya dan pencegahan luka bakar, akan tetapi data yang tersedia sangat bervariasi. Mayoritas data berasal dari negara-negara dengan penghasilan tinggi dan berkaitan dengan akses menuju fasilitas kesehatan, perbedaan lingkungan dan sumber daya system pelayanan kesehatan

**Metode :** Penelitian ini merupakan deskriptif kuantitatif dengan desain *Cohort retrospective study*. Diperoleh 135 sampel pasien dengan diagnosis luka bakar dari penarikan data di ICM RSUP Dr.Sardjito periode Januari 2019 hingga Desember 2022. Pada studi ini membandingkan luaran mortalitas dari sistem skoring ABSI dan sistem skoring Baux Revisi. Uji akurasi dilakukan dengan analisis ROC-AUC dan uji pengaruh menggunakan uji logistik regresi.

**Hasil :** Diperoleh 102 sampel pasien luka bakar HIV dengan sebanyak 77 subyek memiliki skor ABSI kurang  $< 8$ , dan sebanyak 25 subyek memiliki skor ABSI  $\geq 8$ . Terdapat 53 pasien masuk dalam kelompok skor RBS  $\leq 60\%$  dan sisanya 49 pasien masuk ke dalam kelompok skor RBS  $> 60\%$ . Kemudian dilakukan analisis menggunakan kurva AUC (*Area Under The Curve*) – ROC (*Reciever Operating Characteristic*) didapatkan hasil skor ABSI memiliki kurva yang lebih luas pada ROC yaitu dengan AUC 0,834 sedangkan skor Baux revisi memiliki AUC 0,819.

**Kesimpulan :** Didapatkan bahwa skor ABSI memiliki kemampuan akurasi yang tinggi dalam memprediksi mortalitas dibandingkan dengan skor Baux Revisi. Perbedaan komponen



UNIVERSITAS  
GADJAH.MADA

**Perbandingan Sistem Skor Abbreviated Burn Severity Index (ABSI) Dengan Skor Baux Revisi Terhadap**

**Prediksi Mortalitas Pasien Luka Bakar di RSUP Dr. Sardjito**

ZAKARIYA AJI P, Dr.dr. Ishandono Dachlan, Sp.B, Sp.BP-RE(K); dr. Sumadi Lukman, M.Sc, Ph.D, Sp.B(K)Onk

Universitas Gadjah Mada, 2022 | Diunduh dari <http://etd.repository.ugm.ac.id/>

penilaian pada kedua skoring merupakan salah satu penyebab adanya perbedaan tingkat akurasi dari kedua sistem skoring tersebut

**Kata kunci :** ABSI, Baux revisi, skoring luka bakar dan prediksi mortalitas luka bakar.