Survival analysis of patients with transplantation of keratinocytes in years 2008-2015.

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	CEA group	All hospitalized patients without CEA	Differences
Age, years (mean±SD)	41.1±14.7	45.3±16.9	p>0.05
% TBSA			
0-19%	12%	60%	p<0.01
20-39%	26%	25%	
40-59%	31%	9%	
60-79%	28%	4%	
>80%	2%	2%	
% deep burns (III/IV)			
0-9%	41%	37%	p>0.05
10-19%	23%	26%	
20-29%	14%	12%	
30-39%	16%	12%	
>40%	6%	13%	
Days from admission to main operation (mean±SD)	37.0±20.7	8.0±8.1	p<0.01
Sex			
-Female	14% (n=11)	25% (n=999)	p=0.015
- Male	86% (n=70)	75% (n=2919)	
Death	Yes 12% (n=10) No 88% (n=71)	Yes 14% (n=556) No 86% (n=3362)	p>0.05
Rehabilitation	Yes 27% (n=22) No 73% (n=59)	Yes 14% (n=542) No 86% (n=3376)	p=0.014
Total hospitalization lenght in days (mean±SD)	79.9±44.8	26.5±25.3	p<0.01

Goal
Most advanced treatment of extensive burns is keratinocyte transplantation. It should however highlighted that results of clinical transplant keratinocytes are ambiguous. Limitations of this method include long waiting times for cell culture and its susceptibility to infection. The aim of this work was to verify the impact of the application of keratinocytes on the survival of patients. This study specify a group of patients with the greatest chance of successful of treatment and excluded patients in whom there is no reason to apply this costly treatment.

Methodology
All patients diagnosed with burns treated with cultured skin cells between 01.01.2008 and 01.01.2016 were included in the study. Assessment included: patient age and sex,% TBSA,% burns with a depth of III / IV, the number of days from admission to surgery and the need for rehabilitation. Cox proportional hazards model was used.

Results
The analysis included 81 patients with a diagnosis of thermal burns, who were treated with the use of autologous dermal cells. The obtained result of survival in this study is 88%. The analysis shows that there is only one significant predictor of decease - the surface area of burn of third degree (p = 0.029

Discussion
The purposefulness of conducting this expensive and time-consuming procedure isn't clinically justified in groups of patients who may heal spontaneously (burn IIa). Qualification of patients under 50 years old for cell culture is associated with defining age as a negative prognostic factor and the impact of process of aging on the proliferative capacity of cells with normal morphology.

Differences in 40-79% TBSA group

	CEA group	Non-CEA group
Number of patients with TBSA:		
- 40-59%	n = 25	n = 25
-60-79%	n = 23	n = 23
Total	n = 48	n = 48
Age (years)	38	41
Days from admission to main operation	38	11
Hospitalization lenght	82	38
Rehabilitation	13	6
Death	n = 7 (14,6%)	n = 23 (48%)

RELATIVE RISK OF DEATH REDUCTION IS 69,6% !

- The analysis shows that there is only one significant predictor of decease - the surface area of burn of third degree
- With the increase of burns area of 10% the risk of death increased 1.7 times (CI HR 1,06-2,9).
- The probability of two months survival in the case of burns III/IV comprising more than 40% of body surface area is only 60%.

Parameter	< 50 years old	Above 50 years old	Differences
Age, years (mean±SD)	35.2±9.4	60.6±8	p=0.009*
% TBSA (mean±SD)	41.8±21.6	32.3±19.1	p=0.01*
% III/IV° (mean±SD)	8±3.5	7.6±1.9	p>0.05
Lenght of cell culturing (mean±SD)	35.5±16.2	44.8±27.1	p>0.05
Death	4%	9%	p=0.038*

- Patients with cell transplantation were divided into two age groups: under 50 years of age and over 50 years of age
- Patients were compared in terms of size and depth of the burns, the number of days from admission to transplant of cell culture (the duration of cell culture) and the number of deaths in both groups.
- The comparison was made to verify whether the age over 50 years influence on keratinocytes culture.

Conclusion ??
Targeted therapy: patients with TBSA 40-79% of IIb under 50 years old ??