

Patients and methods

Two different groups of 15 patients were selected in order to compare the surgical technics applied from Greek and German surgeons. Περιγραφή της τεχνικής που εφαρμόστηκε και της επέμβασης που έγινε.

Statistical analysis

Results were recorded on an SPSS25 statistical program. Data were less than 35 ($n_1=15$, $n_2=15$) so standard normality assumptions do not meet. Thus, non-parametric statistical tests were conducted. Baseline (preoperative) data, age, BMI, PADUA Score, ASA Score, PreEgfr, Tumour's size of the two groups were compared using Mann – Whitney test. Gender and tumor's size were compared using 2-tailed chi-square test.

Additionally, postoperative data, Hb 10 Hours Postoperative, Warm Ischemia time, Operative time, Egfr Difference the two groups were compared using Mann – Whitney test. Surgical Margins and Modified Clavien System.

Table 1. Baseline quantitative characteristics of the two groups

	Median (25 th – 75 th centile)		P (Mann – Whitney test) (2-sided Fisher exact test)
	Greece	Germany	
Patient's age, yr	70 (62 – 73)	68 (53 – 75)	0.95
BMI	25.0 (24.2 – 27.3)	28.1 (26.1 – 30.8)	0.05
PreoperativeHb	14.4 (12.7 – 15.1)	13.0 (11.8 – 14.4)	0.201
PADUA Score	7.5 (6.8 – 9.0)	7.0 (6.0 – 10.0)	0.798
ASA Score	2.0 (1.0 – 2.0)	2.0 (2.0 – 3.0)	0.140
PreEgfr, ml/min/1.73m ²	76.3 (69.7 – 85.1)	68.0 (63.8 – 87.8)	0.458
Tumor's size, cm	3.5 (2.5 – 3.8)	4.5 (2.2 – 5.0)	0.271
BMI: Body Mass Index			

Table 2. Baseline qualitative characteristics of the two groups

		Percentage		P (X ² test, Fisher's test)
		Greece	Germany	
Gender (%)	Male	40.9	59.1	0.09
	Female	75.0	25.0	
Tumor's side	Right	33.3	66.7	0.07
	Left	66.7	33.3	
Interoperative transfusion	Yes	100.0	0.0	0.10
	No	42.3	57.7	

Table 3. Postoperative quantitative data of the two groups

	Median (25 th – 75 th centile)		P (Mann – Whitney test) (2-sided Fisher exact test)
	Greece	Germany	
Hb 10 Hours	11.8 (11.3 – 13.5)	11.1 (10.5 – 13.3)	0.256

Postoperative			
Follow up	23.0 (19.8 – 22.3)	17.0 (15.0 – 24.3)	0.137
Hb difference	1.4 (0.8 – 3.4)	1.35 (0.675 – 1.925)	0.646
Warm Ischemia time	16.0 (14.0 – 20.0)	23.0 (20.0 – 28.5)	0.160
Operative time	199 (150.0 – 220.0)	115 (100.0 – 180.0)	0.001
Hospital time	5(4-7)	6(5-6)	0.233
Egfr Difference	6.8 (0.0 – 14.1)	0.0 (-5.0 – 13.8)	0.352

Table 4. Postoperative qualitative data of the two groups

		Percentage		P (X ² test 2-sided, Fisher exact test)
		Greece	Germany	
Surgical Margins	Negative	50.0	50.0	1.00
	Positive	50.0	50.0	
Modified Clavien System	None	37.5	62.5	0.06
	Grade (1,2,5)	85.7	14.3	
Major complications	Yes	100.0	0.0	0.31
	No	48.3	51.7	
Minor complications	Yes	83.9	16.7	0.17
	No	41.7	58.3	
Ischemia	Yes	54.5	45.5	0.68
	No	37.5	62.5	
Malignancy	Yes	46.2	53.8	0.28
	No	75.0	25.0	

Results

Baseline characteristics, are listed in tables 1 and 2. The median age of Greek patients was 70yrs while Germans was 68yrs and no statistically significant differences were detected among the two groups under examination. The median BMI of Greek patients was 25 while that of the German patients was 28.1 with no statistically significant difference.

Regarding the median PADUA Scores of both Greek and German patients were 7, with no statistically significant differences. Similarly, the median ASA Scores of both Greek and German patients were 2 with no statistically significant ml/min/1.73m² difference. The median value of the preoperational Egfr for the Greek patients was 76.3 ml/min/1.73m², while for the German patients it was 68.0 ml/min/1.73m² and no statistically significant difference was found. Finally, the median tumor's size of the Greek patients was 3.5 while for the German patients it was 68.0 again with no statistically significant differences (table 1).

With reference to the genders' distribution as well as the tumors' sizes of the two groups no statistically significant differences were located either (table 2).

According to the above, the patients of the two groups seem to have similar baseline characteristics.

The differences among the postoperative characteristics were tested with the Mann – Whitney test for the quantitative data and with the X² test for the qualitative data. The results are shown in tables 3 and 4.

The Greeks median Hb 10 Hours Postoperative was 11.8 while the Germans was 11.1 with no statistically significant difference, while the same results hold for the Hb difference. The Greeks median Warm Ischemia time was 16.0 while the Germans was 23.0 with no statistically significant difference. The Greeks median Egfr Difference was 6.8 while the Germans was 0.0 with no statistically significant difference. The total hospital stay of the greeks patients was 5.0 while the total hospital time of the german patients was 6.0 was with no statistically significant difference. The operative time of the Greeks patients was 199min while the operative time of the German patients was 115 min and a statistically significant difference was detected ($p\text{-value}=0.002<0.05$) as shown in table 3.

With reference to the surgical margins' distribution as well as the modified clavien system size of the two groups no statistically significant differences were located either (table 4).

