**Rezultati**

Statistics were calculated using the R software [REF]. We set the significance threshold to 0.05 (). Values are summarized with their mean value or with percentages where applicable, for uncertainty estimation we used the standard deviation (SD). When we could not simply calculate the SD from the sample (e.g., when working with group level proportions) we used bootstraping to estimate the uncertainty.

When comparing proportions between groups we used the proportions test. The Wilcoxon test was used when working with paired samples, while the Mann-Whitney test was used when working with independent samples. For survival analysis we used the Kaplan-Meier estimator. For analysing correlations between variables, we used (multivariate) linear regression models.

All the code for our analysis along with anonymized data is published at https://github.com/demsarjure/vein\_ablation.

*REF = R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.*

**1. Demografski podatki**

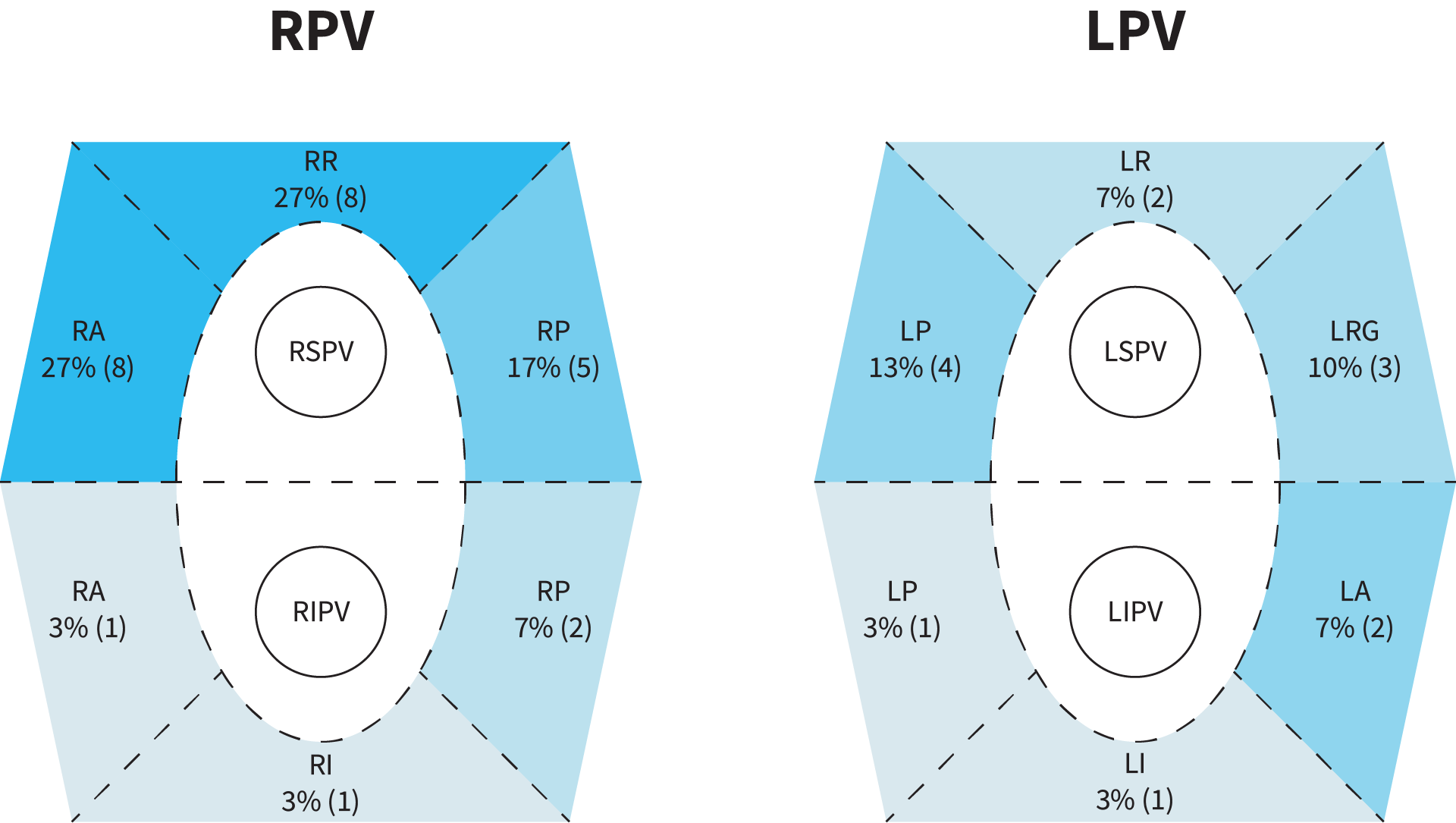
|  |  |  |  |
| --- | --- | --- | --- |
|  | **close** | **high density** | **p** |
| **age** | 63.05 ± 11.25 | 61.56 ± 9.6 | 0.44 |
| **gender** | 50 ± 9.2% male | 66.67 ± 8.67% male | 0.29 |
| **bmi** | 29.69 ± 5.74 | 27.88 ± 4.4 | 0.4 |
| **la\_volume\_index** | 39.87 ± 11.4 | 39.1 ± 10.21 | 0.54 |
| **la\_size** | 41.1 ± 4.13 | 41.2 ± 6.05 | 0.92 |
| **lvedvi** | 60.6 ± 7.68 | 58.89 ± 8.26 | 0.71 |
| **class\_III\_drugs** | 33.33 ± 8.59% | 26.67 ± 8.11% | 0.78 |
| **class\_I\_drugs** | 43.33 ± 8.91% | 33.33 ± 8.63% | 0.6 |
| **beta\_blockers** | 56.67 ± 8.97% | 53.33 ± 9.08% | 1 |
| **anticoagulant** | 83 ± 6.83% | 80 ± 7.3% | 1 |
| **probnp** | 255.21 ± 169.69 | 313.9 ± 494.2 | 0.27 |
| **chf** | 3.33 ± 3.27% | 3.33 ± 3.3% | 1 |
| **hypertension\_history** | 56.67 ± 8.97% | 43.33 ± 9.05% | 0.44 |
| **age\_75** | 13.33 ± 6.21% | 3.33 ± 3.24% | 0.35 |
| **diabetes\_history** | 13.33 ± 6.2% | 10 ± 5.49% | 1 |
| **vascular\_disease** | 10 ± 5.45% | 3.33 ± 3.25% | 0.6 |
| **age\_65\_74** | 50 ± 9.22% | 36.67 ± 8.7% | 0.6 |
| **cha2ds2vasc** | 2 ± 1.46 | 1.3 ± 1.05 | 0.05 |

**2. Proceduralni podatki**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **close** | **high density** | **p** |
| **skin\_skin\_time** | 131.47 ± 27.06 | 144.87 ± 23.91 | 0.05 |
| **la\_dwell\_time** | 114.47 ± 22.63 | 125.8 ± 20.77 | **0.04** |
| **ablation\_time** | 29.44 ± 7.9 | 31.47 ± 8.6 | 0.44 |
| **ablation\_time\_hd** | / | 2.34 ± 2.18 | / |
| **hd\_map\_time** | / | 20.33 ± 7.09 | / |
| **numer\_of\_rf\_lesions\_pvi** | 89.7 ± 20.26 | 89.07 ± 19.92 | 0.89 |
| **additional\_lesions\_hd** | / | 7 ± 6.83 | / |
| **first\_pass\_rspv** | 76.67 ± 7.76% | 86.68 ± 6.19% | 0.5 |
| **first\_pass\_ripv** | 83.33 ± 6.78% | 90 ± 5.4% | 0.7 |
| **first\_pass\_lspv** | 83.33 ± 6.79% | 96.67 ± 3.27% | 0.19 |
| **first\_pass\_lipv** | 100% | 96.67 ± 3.27% | 1 |
| **first\_pass\_per\_patient** | 60 ± 8.88% | 80 ± 7.37 | 0.16 |

**3. Segmenti in dormanti**

|  |  |  |  |
| --- | --- | --- | --- |
| **lokacija** | | **število** | **delež** |
| **RPV** | **rspv\_rr** | 8 ± 2.41 | 26.67 ± 8.07% |
|  | **rspv\_ra** | 8 ± 2.83 | 26.67 ± 9.28% |
|  | **rspv\_rp** | 5 ± 2.01 | 16.67 ± 6.74% |
|  |  |  |  |
|  | **ripv\_ra** | 1 ± 0.99 | 3.33 ± 3.26% |
|  | **ripv\_rp** | 2 ± 1.37 | 6.67 ± 4.58% |
|  | **ripv\_ri** | 1 ± 0.98 | 3.33 ± 3.27% |
|  |  |  |  |
|  |  |  |  |
| **LPV** | **lspv\_lr** | 2 ± 1.37 | 6.67 ± 4.55% |
|  | **lspv\_lrg** | 3 ± 1.66 | 10 ± 5.51% |
|  | **lspv\_lp** | 4 ± 1.87 | 13.33 ± 6.22% |
|  |  |  |  |
|  | **lipv\_la** | 2 ± 1.36 | 6.67 ± 4.55% |
|  | **lipv\_li** | 1 ± 0.98 | 3.33 ± 3.25% |
|  | **lipv\_lp** | 1 ± 0.99 | 3.33 ± 3.3% |

****

**4. UZ meritve po 12 mesecih**

|  |  |  |  |
| --- | --- | --- | --- |
| **la\_volume\_index\_12** | **la\_volume\_index** | **razlika** | **p** |
| 41.15 ± 10.73 | 39.48 ± 10.74 | 1.67 ± 9.16 | 0.23 |

**5. Čas drugega posega**

|  |  |  |
| --- | --- | --- |
| **close** | **high\_density** | **p** |
| 444.69 ± 94.71 | 381.69 ± 103.71 | **0.03** |

**6. Število izoliranih ven**

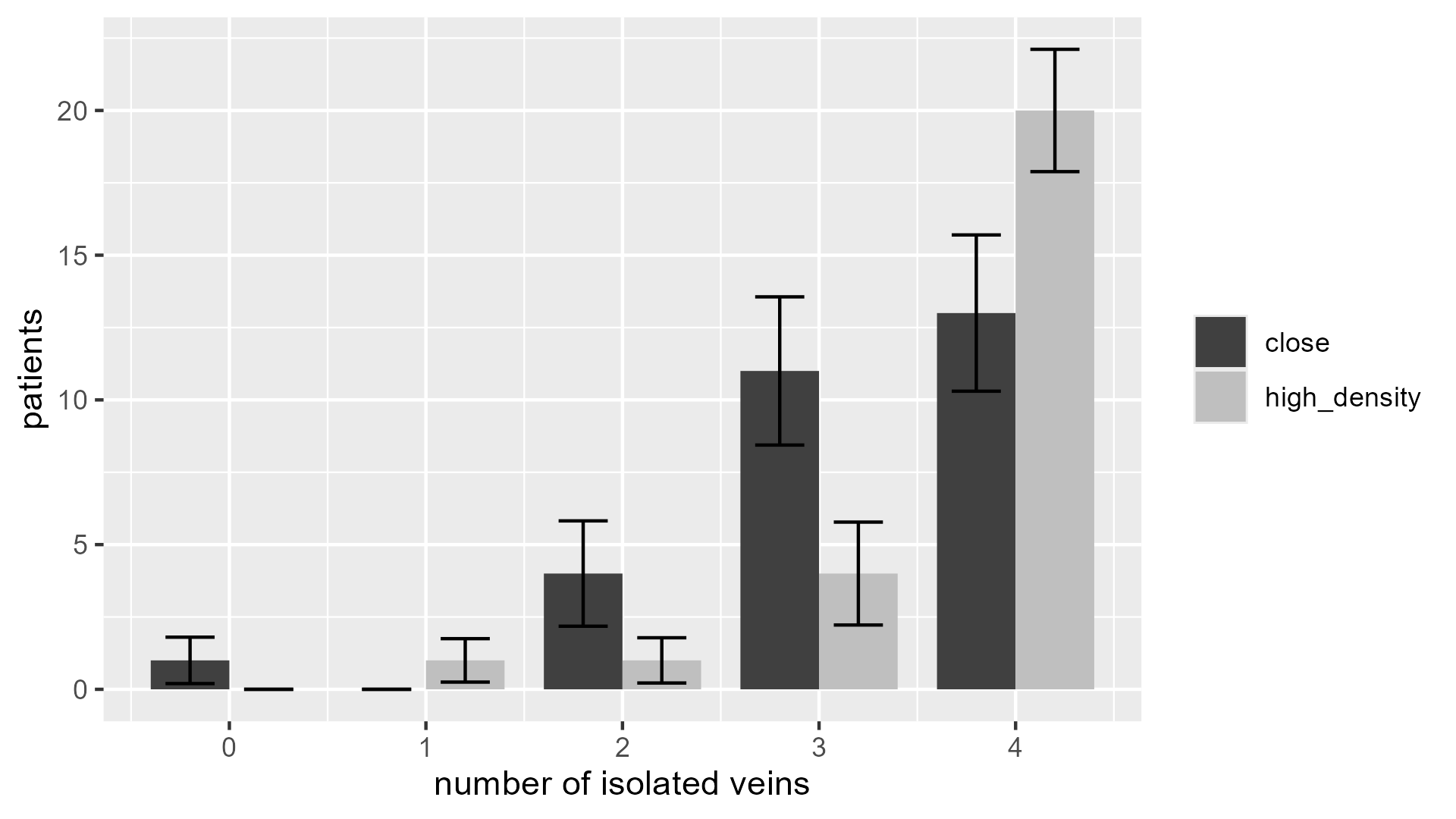
|  |  |  |  |
| --- | --- | --- | --- |
|  | **close** | **high density** | **p** |
| **number of isolated veins** | 3.2 ± 0.94 | 3.65 ± 0.75 | **0.02** |
| **percentage of isolated veins** | 80.17 ± 23.5% | 91.35 ± 18.63% | **0.03** |
| **all four veins isolated** | 44.83 ± 9.22% | 76.92 ± 8.3% | **0.03** |

**Slika 1:**

**A graph of a number of veins

Description automatically generated**

**Slika 2:**

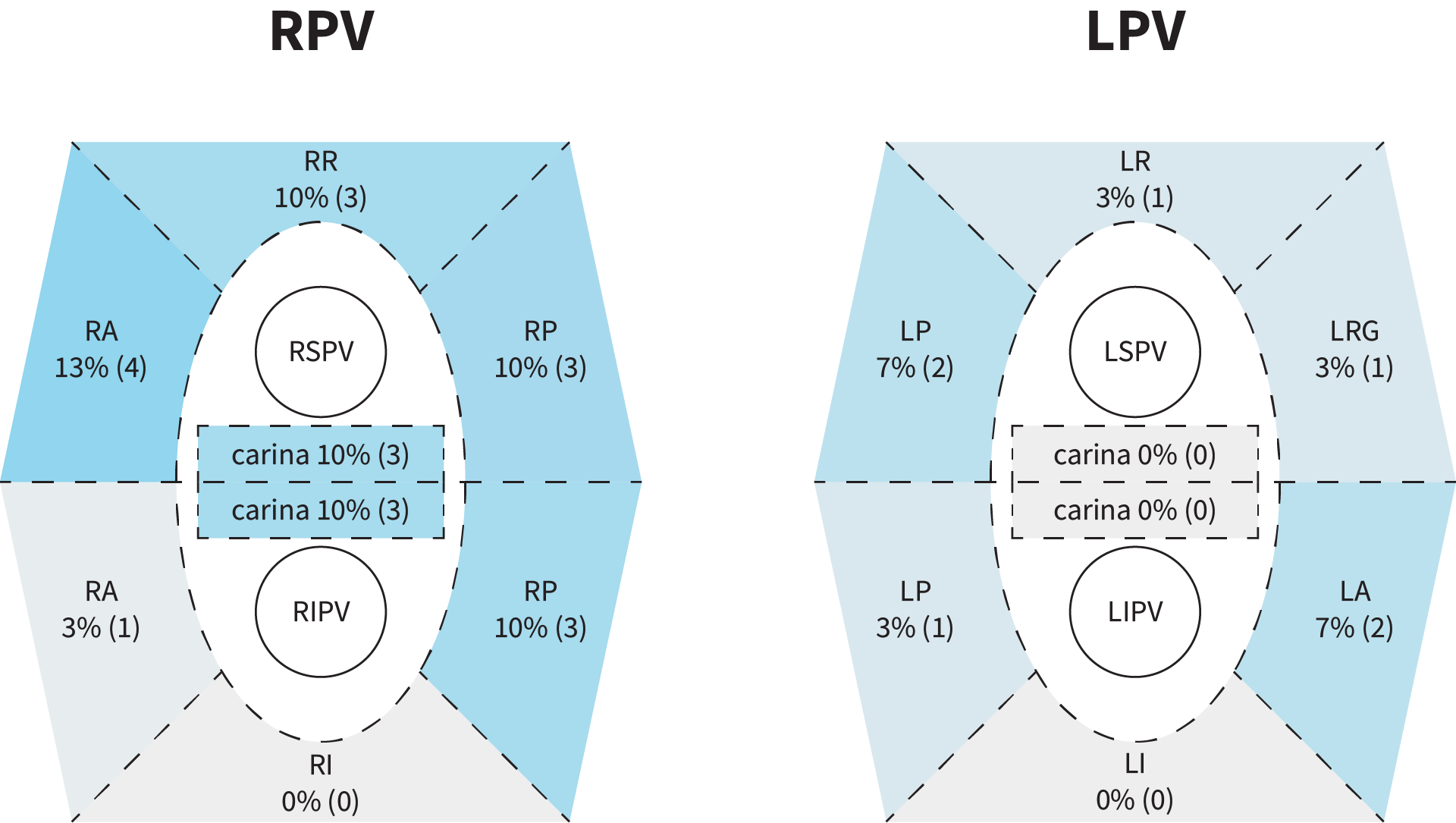


**7. Čas in število lezij**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **close** | **high density** | **p** |
| **skin\_skin\_time2** | 80.93 ± 34.71 | 62.8 ± 39.96 | 0.09 |
| **ablate\_reisolization\_time** | 1.95 ± 2.68 | 0.81 ± 1.78 | **0.03** |
| **ablate\_removal\_time\_dormant** | 2.56 ± 2.21 | 1.99 ± 2.82 | 0.07 |
| **rf\_lesion\_number\_isolation** | 7.45 ± 8.57 | 2.42 ± 5.12 | **0.01** |
| **rf\_lesion\_number\_gap** | 9.79 ± 8.94 | 2.73 ± 5.46 | **0.0007** |

**8. Incidenca neizoliranih mest**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **lokacija** | | **close %** | **close** | **high\_density %** | **high\_density** | **p** |
| **RPV** | **rspv\_rr** | 10 ± 5.41% | 3 ± 1.64 | 0% | 0 | 0.25 |
|  | **rspv\_ra** | 13.33 ± 6.25% | 4 ± 1.86 | 6.9 ± 4.76% | 2 ± 1.35 | 0.7 |
|  | **rspv\_rp** | 10 ± 5.5% | 3 ± 1.67 | 6.9 ± 4.68% | 2 ± 1.37 | 1 |
|  | **carina** | 10 ± 5.5% | 3 ± 1.63 | 0% | 0 | 0.25 |
|  |  |  |  |  |  |  |
|  | **ripv\_ra** | 3.33 ± 3.25% | 1 ± 0.98 | 0% | 0 | 1 |
|  | **ripv\_rp** | 10 ± 5.44% | 3 ± 1.66 | 0% | 0 | 0.27 |
|  | **ripv\_ri** | 0% | 0 | 0% | 0 | 1 |
|  | **carina** | 10 ± 5.45% | 3 ± 1.64 | 0% | 0 | 0.27 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **LPV** | **lspv\_lr** | 3.33 ± 3.26% | 1 ± 0.98 | 3.45 ± 3.38% | 1 ± 0.98 | 1 |
|  | **lspv\_lrg** | 3.33 ± 3.3% | 1 ± 0.97 | 3.45 ± 3.36% | 1 ± 0.98 | 1 |
|  | **lspv\_lp** | 6.67 ± 4.54% | 2 ± 1.37 | 3.45 ± 3.38% | 1 ± 0.97 | 0.77 |
|  | **carina** | 0% | 0 | 0% | 0 | 1 |
|  |  |  |  |  |  |  |
|  | **lipv\_la** | 6.67 ± 4.52% | 2 ± 1.38 | 0% | 0 | 1 |
|  | **lipv\_li** | 0% | 0 | 3.45 ± 3.39% | 1 ± 0.99 | 1 |
|  | **lipv\_lp** | 3.33 ± 3.26% | 1 ± 0.98 | 3.45 ± 3.4% | 1 ± 0.97 | 1 |
|  | **carina** | 0% | 0 | 0% | 0 | 1 |

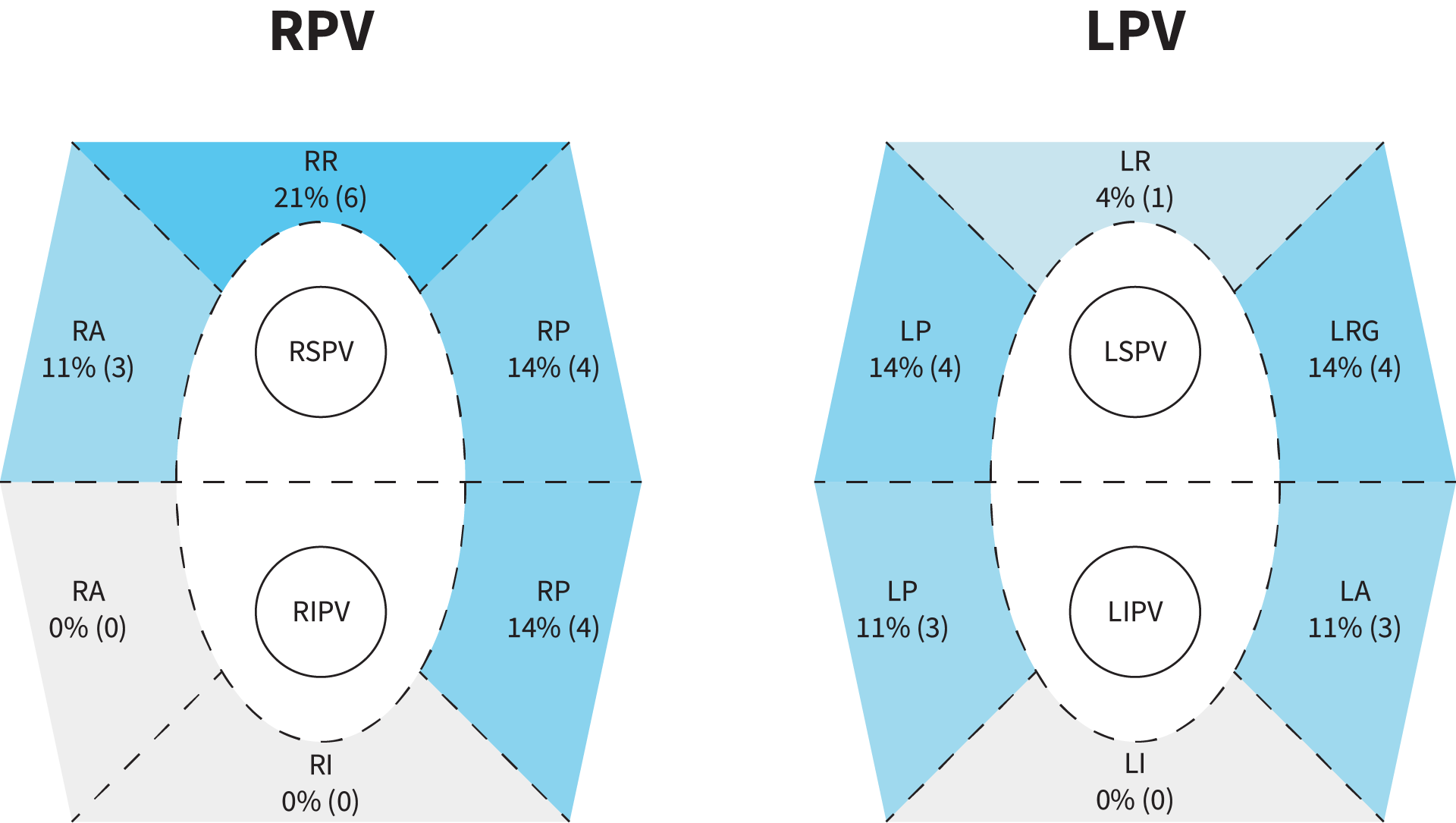
****

**9. Dormant conduction**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **lokacija** | | **close** | **high\_density** | **p** |
| **RPV** | **rspv\_rr** | 6 ± 2.15 | 1 ± 0.98 | 0.06 |
|  | **rspv\_ra** | 3 ± 1.65 | 2 ± 1.35 | 0.72 |
|  | **rspv\_rp** | 4 ± 1.86 | 1 ± 0.98 | 0.19 |
|  |  |  |  |  |
|  | **ripv\_ra** | 0 | 0 | 1 |
|  | **ripv\_rp** | 4 ± 1.86 | 2 ± 1.35 | 0.45 |
|  | **ripv\_ri** | 0 | 0 | 1 |
|  |  |  |  |  |
|  |  |  |  |  |
| **LPV** | **lspv\_lr** | 1 ± 0.98 | 0 | 0.35 |
|  | **lspv\_lrg** | 4 ± 1.86 | 1 ± 0.98 | 0.19 |
|  | **lspv\_lp** | 4 ± 2.33 | 0 | 0.09 |
|  |  |  |  |  |
|  | **lipv\_la** | 3 ± 1.62 | 0 | 0.09 |
|  | **lipv\_li** | 0 | 0 | 1 |
|  | **lipv\_lp** | 3 ± 1.64 | 0 | 0.09 |

Primerjava med skupinama čez vse lokacije:

|  |  |  |
| --- | --- | --- |
| **close** | **high\_density** | **p** |
| 34 ± 5.1 | 7 ± 2.29 | **0.00002** |



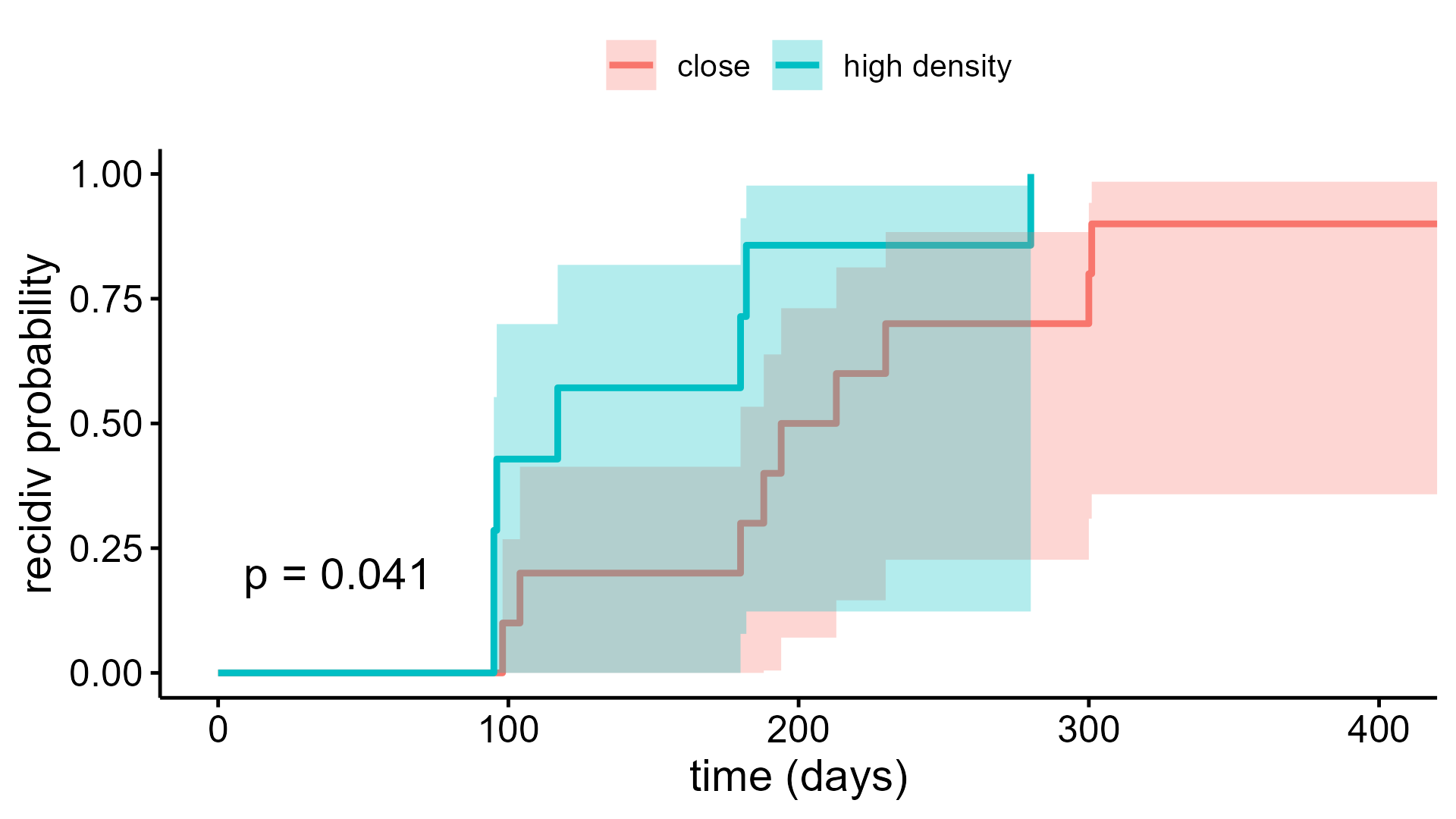
**10. Klinični recidivi**

Število/procent recidivov:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **close** | **high density** | **p** |
| **number of recidivs** | 10 ± 2.57 | 7 ± 2.32 | 0.4 |
| **percentage of recidivs** | 33.33 ± 8.49% | 23.33 ± 7.67% | 0.5 |

Razlika od posega do recidiva v dnevih:

|  |  |  |
| --- | --- | --- |
| **close** | **high\_density** | **p** |
| 224.6 ± 101.14 | 149.29 ± 69.37 | **0.04** |
|  |  |  |



*Ali so pacienti z recidivom imeli v povprečju rekonektiranih več ven kot tisti, ki niso imeli recidiva?*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **recidiv** | **no\_recidiv** | **p** |
| **number of reconnected veins** | 0.76 ± 1.25 | 0.5 ± 0.65 | 0.94 |

*Ali so pacienti z recidivom imeli v povprečju več dormantov kot tisti, ki niso imeli recidiva?*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **recidiv** | **no\_recidiv** | **p** |
| **dormants** | 0.06 ± 0.24 | 0.6 ± 0.24 | 0.65 |

**11. Lokacije pred/po**

*Besedilo ki sledi je verjetno strokovno in terminološko precej napačno. To morate vi urediti :).*

**a.**

*In total the high density procedure was used on 29 patients, since each patient has 12 vein locations this means that the high density procedure was applied to 348 locations in total. During the first procedure, we found 35 dormants in total, while we found only 7 dormants in total during the second procedure. In only one case the dormant in the second procedure was found at the same location as during the first procedure. This means that our results suggest that having a dormant at one location during the first procedure does not mean that the patient will more likely have the dormant at the same location during the second procedure (p < 0.00001).*

**12. Rekonektirane vene**

Ali demografski podatki (J-AH) napovedujejo rekonektirane vene. Gledamo stolpec all 4 veins, 0 pomeni da je bilo rekonektirano. Tukaj sem gledal čez vse podatke, nisem nič razbijal po skupinah.

Uporabil sem naslednje demografske spremenljivke:

* age,
* gender,
* bmi,
* la\_volume\_index,
* la\_size,
* lvedvi,
* anticoagulant,
* probnp,
* chf,
* hypertension\_history,
* age\_75,
* diabetes\_history,
* vascular\_disease,
* age\_65\_74,
* cha2ds2vasc.

Nič pametnega ne dobimo, BMI ima najnižjo p vrednost (0.098).

Enako samo za proceduralne parametre:

* skin\_skin\_time,
* la\_dwell\_time,
* ablation\_time,
* number\_of\_rf\_lesions\_pvi,
* first\_pass\_rspv,
* first\_pass\_ripv,
* first\_pass\_lspv,
* first\_pass\_lipv,
* first\_pass\_per\_patient,
* all\_4\_veins\_isolated.

Nič pametnega, p za vse parametre je nad 0.2.