**Supplement**

Predictors of left atrial PN capture in RSPV antrum

The only anatomical feature predicting the course of the right PN extending in to the RSPV antrum was the course of the right PN in the SVC and RA (Suppl. Table 1). A posterolateral course of the PN in the SVC and upper RA showed a significant association with PNC in the RSPV antrum (SVC: 31% PNC in RSPV antrum, p=0,038; Upper RA: 41% PNC in RSPV antrum, p=0,002). On the other hand, an anterolateral course of the PN in the SVC was significantly associated with absence of PNC in the RSPV antrum (100 % of patients having no PNC in the RSPV antrum, p=0,024).

Clinical parameters (e.g., BMI: 29 ± 4 kg/m² for no PNC in RSPV antrum vs. 28 ± 5 kg/m² for PNC in the RSPV antrum; p=0,134) as well as other anatomical parameters (e.g., LA size: 43 ± 4 vs. 42 ± 6 mm; p=0,291) did not predict PNC in the RSPV antrum.

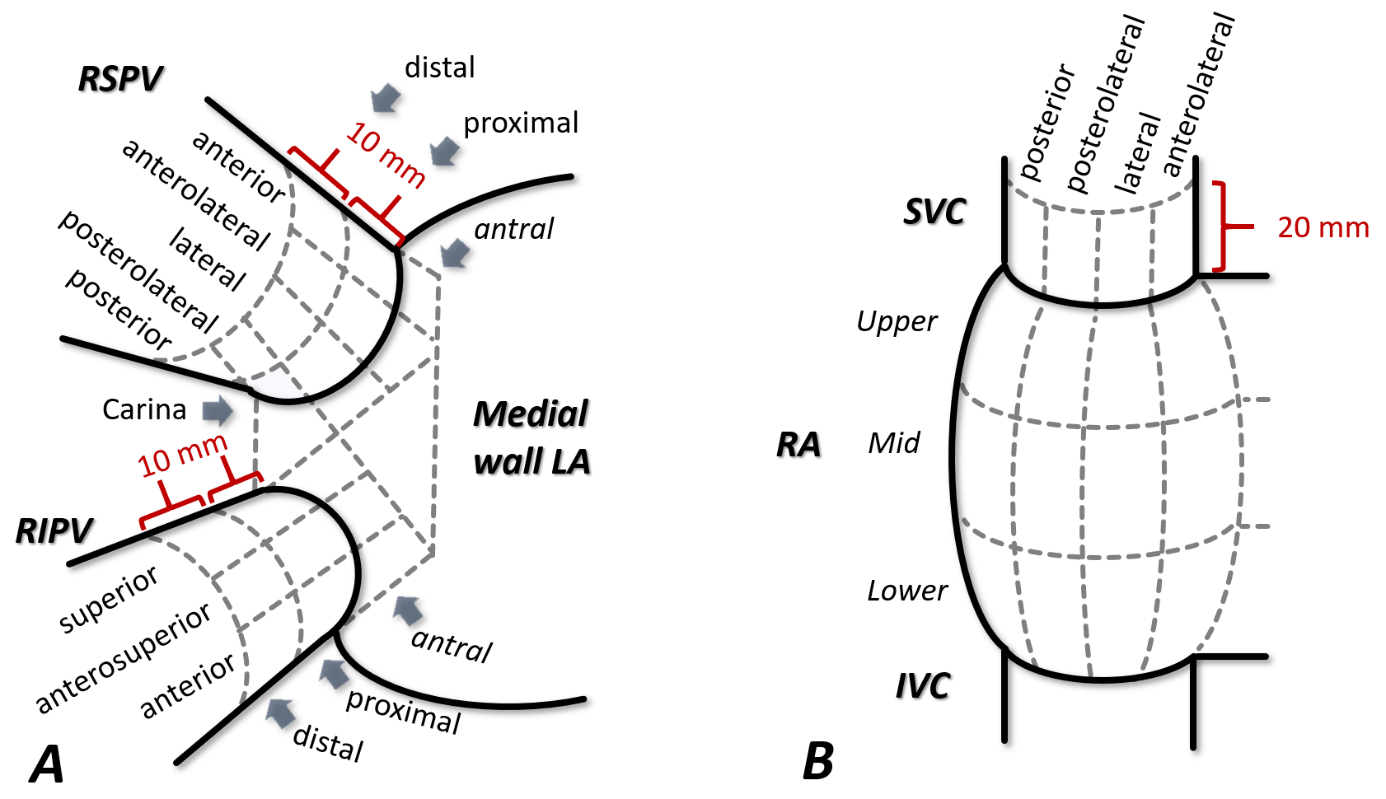
However, for everyday clinical practice, we suggest circumscribed screening for PNC at the most common location, which is in the anterior and inferior RSPV antrum. Detailed PN mapping in the RA would be too time-consuming and was performed for the purpose of this study to put the PN course in both atria into perspective.

**Supplemental Table 1: Right atrial PNC predicting PNC in RSPV antrum, n=137**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *PNC in*  *RSPV antrum* | |  | *No PNC in*  *RSPV antrum* | | *P* |
|  |  |
| SVC posterolateral PN course | **10** | **(31%)** |  | 22 | (69%) | **0,038** |
| SVC lateral PN course | 13 | (19%) |  | 56 | (81%) | 1 |
| SVC anterolateral PN course | 0 |  |  | **19** | **(100%)** | **0,024** |
| Upper RA posterior PN course | 0 |  |  | 2 | (100%) | 1 |
| Upper RA posterolateral PN course | **11** | **(41%)** |  | 19 | (59%) | **0,002** |
| Upper RA lateral PN course | 4 | (10%) |  | 35 | (90%) | 0,148 |
| Upper RA anterolateral PN course | 0 |  |  | 2 | (100%) | 1 |
| Mid RA posterior PN course | 2 | (67%) |  | 1 | (33%) | 0,086 |
| Mid RA posterolateral PN course | 8 | (25%) |  | 24 | (75%) | 0,298 |
| Mid RA lateral PN course | 3 | (13%) |  | 21 | (88%) | 0,566 |
| Lower RA posterior PN course | 0 |  |  | 2 | (100%) | 1 |
| Lower RA posterolateral PN course | 8 | (24%) |  | 26 | (76%) | 0,442 |
| Lower RA lateral PN course | 3 | (10%) |  | 27 | (90%) | 0,284 |

Data is displayed as n (%); LA, left atrium; PN, phrenic nerve; RA, right atrium; RSPV, right superior pulmonary vein; SVC, superior vena cava.

**Supplemental Figure 1:**



IVC, inferior vena cava; LA, left atrium; RA, right atrium; RIPV, right inferior pulmonary vein; RSPV, right superior pulmonary vein; SVC, superior vena cava.