**Incidence of complications related to catheter ablation of atrial fibrillation and atrial flutter: a nationwide in-hospital analysis of administrative data for Germany in 2014**

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**SUPPLEMENTAL MATERIAL**

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| **Table S1. Definition of patient groups according to the German Procedure Classification (OPS)** |
| **Patient group** | **OPS codes** |
| Group 1 | 8-835.a3 and/or 8-835.a5 and not 8-835.a0 and not 8-835.23 and not 8-835.33 and not 8-835.43 and not 8-835.b3 and not 8-835.c3 and not 8-835.d3 and not 8-835.25 and not 8-835.35 and not 8-835.45 and not 8-835.9 and not 8-835.b5 and not 8-835.c5 and not 8-835.e and not 8-835.20 and not 8-835.30 and not 8-835.40 and not 8-835.b0 and not 8-835.c0 and not 8-835.d0 |
| Group 2 | 8-835.25 and/or 8-835.35 and/or 8-835.45 and/or 8-835.9 and/or 8-835.b5 and/or 8-835.c5 and/or 8-835.e and not 8-835.23 and not 8-835.33 and not 8-835.43 and not 8-835.b3 and not 8-835.c3 and not 8-835.d3 and not 8-835.20 and not 8-835.30 and not 8-835.40 and not 8-835.b0 and not 8-835.c0 and not 8-835.d0 and not 8-835.a0 and not 8-835.a3 and not 8-835.a5 . |
| Group 3 | 8-835.23 and/or 8-835.33 and/or 8-835.43 and/or 8-835.b3 and/or 8-835.c3 and/or 8-835.d3 and not 8-835.25 and not 8-835.35 and not 8-835.45 and not 8-835.9 and not 8-835.b5 and not 8-835.c5 and not 8-835.e and not 835.20 and not 8-835.30 and not 8-835.40 and not 8-835.b0 and not 8-835.c0 and not 8-835.d0 and not 8-835.a0 and not 8-835.a3 and not 8-835.a5. 8-835.23 and/or 8-835.33 and/or 8-835.43 and/or 8-835.b3 and/or 8-835.c3 and/or 8-835.d3 and (8-835.25 and/or 8-835.35 and/or 8-835.45 and/or 8-835.9 and/or 8-835.b5 and/or 8-835.c5 and/or 8-835.e) and not 8-835.20 and not 8-835.30 and not 8-835.40 and not 8-835.b0 and not 8-835.c0 and not 8-835.d0 and not 8-835.a0 and not 8-835.a3 and not 8-835.a5 |
| Group 4 | 8-835.23 and/or 8-835.33 and/or 8-835.43 and/or 8-835.b3 and/or 8-835.c3 and/or 8-835.d3 and (8-835.20 and/or 8-835.30 and/or 8-835.40 and/or 8-835.b0 and/or 8-835.c0 and/or 8-835.d0) and not 8-835.25 and not 8-835.35 and not 8-835.45 and not 8-835.9 and not 8-835.b5 and not 8-835.c5 and not 8-835.e and not 8-835.a0 and not 8-835.a3 and not 8-835.a5. 8-835.25 and/or 8-835.35 and/or 8-835.45 and/or 8-835.9 and/or 8-835.b5 and/or 8-835.c5 and/or 8-835.e and ( 8-835.20 and/or 8-835.30 and/or 8-835.40 and/or 8-835.b0 and/or 8-835.c0 and/or 8-835.d0 ) and not 8-835.23 and not 8-835.33 and not 8-835.43 and not 8-835.b3 and not 8-835.c3 and not 8-835.d3 and not 8-835.a0 and not 8-835.a3 and not 8-835.a5. 8-835.23 and/or 8-835.33 and/or 8-835.43 and/or 8-835.b3 and/or 8-835.c3 and/or 8-835.d3 and (8-835.25 and/or 8-835.35 and/or 8-835.45 and/or 8-835.9 and/or 8-835.b5 and/or 8-835.c5 and/or 8-835.e) and (8-835.20 and/or 8-835.30 and/or 8-835.40 and/or 8-835.b0 and/or 8-835.c0 and/or 8-835.d0) and not 8-835.a0 and not 8-835.a3 and not 8-835.a5 |
| Group 5 | 8-835.20 and/or 8-835.30 and/or 8-835.40 and/or 8-835.a0 and/or 8-835.b0 and/or 8-835.c0 and/or 8-835.d0 and not 8-835.23 and not 8-835.33 and not 8-835.43 and not 8-835.b3 and not 8-835.c3 and not 8-835.d3 and not 8-835.25 and not 8-835.35 and not 8-835.45 and not 8-835.9 and not 8-835.b5 and not 8-835.c5 and not 8-835.e and not 8-835.a3 and not 8-835.a5 |

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| **Table S2. Definitions of complications and procedures according to ICD-10-GM and OPS codes** |
| **Complication** | **Parameter / ICD-10-GM code / OPS code** |
| In-Hospital Death | 079 |
| Pericardial Effusion  | I31\* |
| Stroke  | I61\*, I62\*, I63\*, I64, I66\*, G45\* |
| Pneumonia  | J15\*, J18\* |
| Phrenicus lesion  | J98.6 |
| Esophageal perforation  | K22.3 |
| Access site complications(Bleeding, hematoma,shock, infection,vascular complication) | T81, T81.0, T81.1, T81.4, T81.7 |
| Cardiac arrest  | I46\* |
| AV block III°  | I44.2 |
| Pericardial drainage | 8-152.0 and/or 5-370\* |
| Vascular intervention and/orsurgery | 5-38\* and/or 5-39\* |
| Transfusion | 8-800\* |
| A code marked by an asterisk indicates that all subheadings of this code are included. |

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| **Tables S3. Definition of patient characteristics and comorbidities according to ICD-10-GM codes** |
| **Patient characteristic / comorbidity** | **ICD-10-GM code** |
| Paroxysmal atrial fibrillation  | I48.0 |
| Persistent atrial fibrillation | I48.1 |
| Permanent atrial fibrillation  | I48.2 |
| Atrial flutter common and/or uncommon  | I48.3, I48.4, I48.9 |
| Hypertension  | I10\*-I15\* |
| COPD  | J44\* |
| Pulmonary hypertension  | I27\* |
| Sleep apnoea  | G47\* |
| Hyperthyroidism  | E05\* |
| Diabetes mellitus  | E10\*, E11\*, E12\*, E13\*, E14+ |
| Chronic kidney disease  | N18\* (N18.1-N18.5) |
| Coronary artery disease  | I25\* |
| Myocardial infarction  | I21\* |
| Cardiomyopathy  | I42\* |
| Chronic left heart failure  | I50.1\* |
| Aortic stenosis  | I35\* |
| Mitral valve disease, non-rheumatic  | I34\* |
| Other rheumatic heart disease  | I09\* |
| Peripheral arteriovascular disease  | I70.2\* |
| A code marked by an asterisk indicates that all subheadings of this code are included. |