QRS fragmentation is associated with increased risk of ventricular arrhythmias in high-risk patients; data from the SMASH 1 Study
Supplemental Table 1. Predictors of fQRS in baseline ECG assessed by multivariable logistic regression analysis

| Predictor                                | Total population | Patients with native QRS in baseline ECG |
|------------------------------------------|------------------|-----------------------------------------|
|                                          | Hazard Ratio     | Z-value | P-value | Hazard Ratio     | Z-value | P-value |
|                                          | [95% CI]         |         |         | [95% CI]         |         |         |
| Age                                      | 1.17 [0.84-1.62] | 0.9     | 0.35    | 1.15 [0.80-1.66] | 0.8     | 0.44    |
| Gender                                   | 0.98 [0.41-2.37] | -0.04   | 0.97    | 1.07 [0.42-2.72] | 0.2     | 0.88    |
| Body mass index, kg/m²                   | 1.20 [0.61-2.36] | 0.5     | 0.61    | 1.25 [0.59-2.64] | 0.6     | 0.56    |
| Coronary artery disease                  | 3.31 [1.37-7.98] | 2.7     | 0.01    | 2.39 [0.86-6.64] | 1.7     | 0.09    |
| History of heart failure                 | 0.99 [0.73-1.33] | -0.1    | 0.92    | 1.07 [0.76-1.49] | 0.4     | 0.70    |
| Estimated glomerular filtration rate, ml/min/1.73m² | 0.99 [0.85-1.15] | -0.2    | 0.88    | 1.02 [0.85-1.23] | 0.2     | 0.81    |
| ICD indication                           | 2.15 [1.13-4.12] | 2.3     | 0.02    | 1.90 [0.89-4.06] | 1.7     | 0.10    |
| QRS duration                             | 1.11 [0.91-1.36] |         |         |                 | 1.1     | 0.29    |
| QRS axis                                 | 1.02 [0.95-1.10] |         |         |                 | 0.7     | 0.50    |
| Q wave presence                          | 1.32 [0.62-2.83] |         |         |                 | 0.7     | 0.47    |
| Bundle branch block                      | 0.53 [0.17-1.65] |         |         |                 | -1.1    | 0.27    |
**Supplemental Table 2.** Cox regression model for the two study centers, univariate and multivariate model.

|                          | Unadjusted model | Adjusted model* |
|--------------------------|------------------|-----------------|
|                          | Hazard Ratio,    | Hazard Ratio,   |
|                          | [95% Conf. Interval] | [95% Conf. Interval] |
| Akershus University Hospital | 3.37, [1.98-5.73] | 2.39, [1.21-4.72] |
| Stavanger University Hospital | 3.63, [1.89-6.98] | 3.79, [1.75-8.20] |
| *P*-for interaction       |                  | P=0.93          |

*Adjusted for age, gender, body mass index, coronary artery disease, heart failure, estimated glomerular filtration rate, ICD indication (primary vs. secondary), QRS duration, QRS axis, presence of Q-wave, and bundle branch block on baseline ECG in patients with native QRS
### Suppl. Table 3: Cox regression analyses for the association between fQRS and incident ventricular arrhythmia in patients with primary ICD indication; univariate and multivariate models.

| \[95\% CI\] | Hazard Ratio | Z-value | P-value |
|--------------|--------------|---------|---------|
| Unadjusted model | Univariate | | | Multivariate |
| QRS fragmentation | 6.05 [3.16-11.60] | 5.4 | <0.001 | 5.88 [3.06-11.29] | 5.3 | <0.001 | 5.47 [2.83-10.56] | 5.1 | <0.001 | 11.22 [4.20-29.99] | 4.8 | <0.001 |
| Age | 1.11 [0.86-1.44] | 0.8 | 0.42 | 1.07 [0.79-1.44] | 0.4 | 0.66 | 1.09 [0.70-1.68] | 0.4 | 0.70 |
| Sex | 0.39 [0.14-1.08] | -1.8 | 0.07 | 0.56 [0.19-1.61] | -1.1 | 0.28 | 0.40 [0.09-1.79] | -1.2 | 0.23 |
| Body mass index, kg/m² | 1.10 [0.66-1.84] | 0.4 | 0.72 | 1.05 [0.63-1.75] | 0.2 | 0.86 | 1.06 [0.52-2.18] | 0.2 | 0.86 |
| Coronary artery disease | 1.83 [0.91-3.68] | 1.7 | 0.09 | 2.07 [0.68-6.26] | 1.3 | 0.20 |
| History of heart failure | 1.36 [0.91-2.02] | 1.5 | 0.13 | 1.48 [0.91-2.41] | 1.6 | 0.12 |
| eGFR, ml/min/1.73m² | 1.10 [0.97-1.24] | 1.5 | 0.14 | 1.14 [0.96-1.37] | 1.5 | 0.14 |
| QRS duration | 0.94 [0.74-1.19] | -0.5 | 0.59 |
| QRS axis | 0.97 [0.93-1.01] | -1.3 | 0.18 |
| Q wave presence | 2.83 [1.19-6.71] | 2.4 | 0.02 |
| Bundle branch block | 0.86 [0.22-3.38] | -0.2 | 0.83 |

* Model 1: adjusted for age, sex and body mass index
** Model 2: adjusted for Model 1 + coronary artery disease, heart failure and estimated glomerular filtration rate
***Model 3: adjusted for Model 2 + QRS duration, QRS axis, presence of Q-wave, and bundle branch block on baseline ECG in patients with native rhythm on ECG