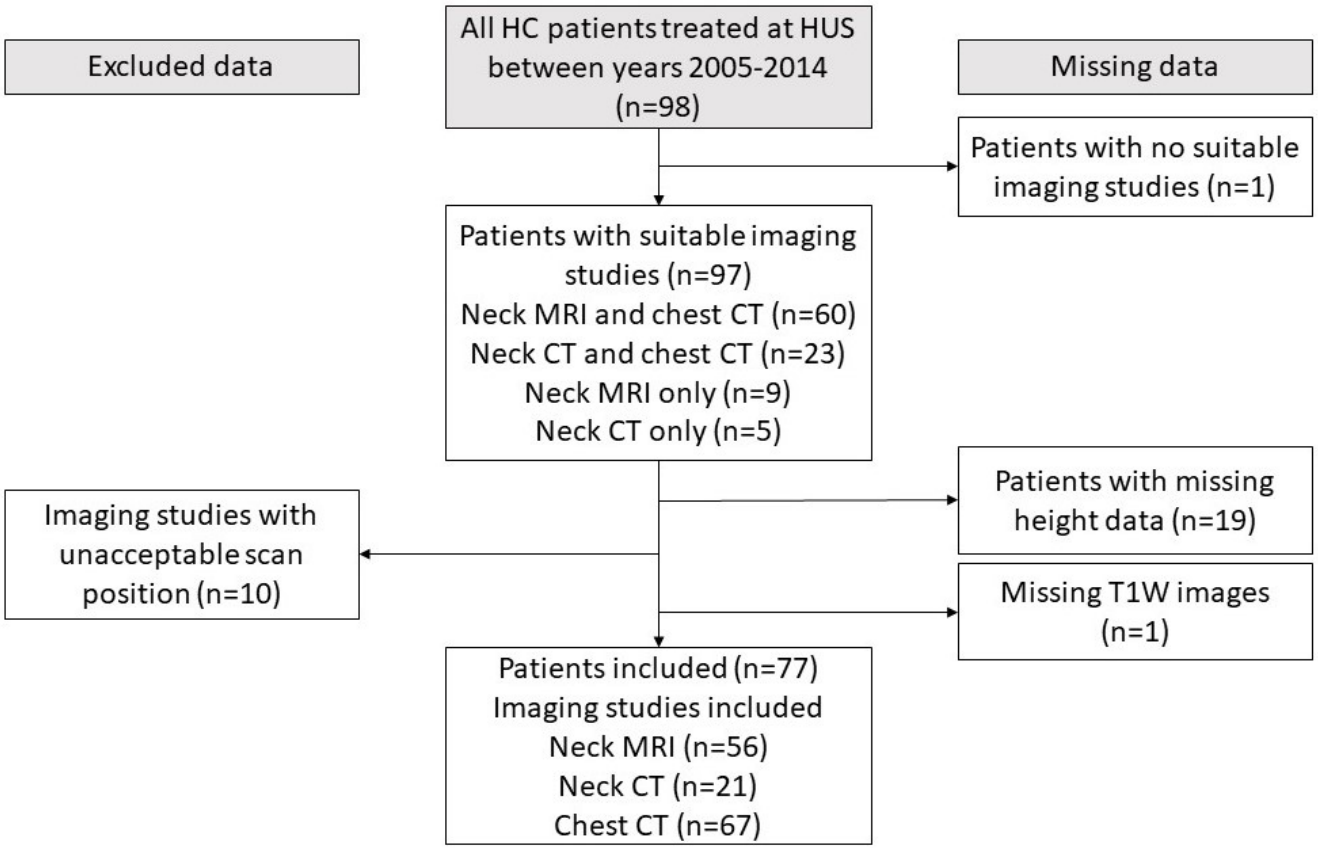
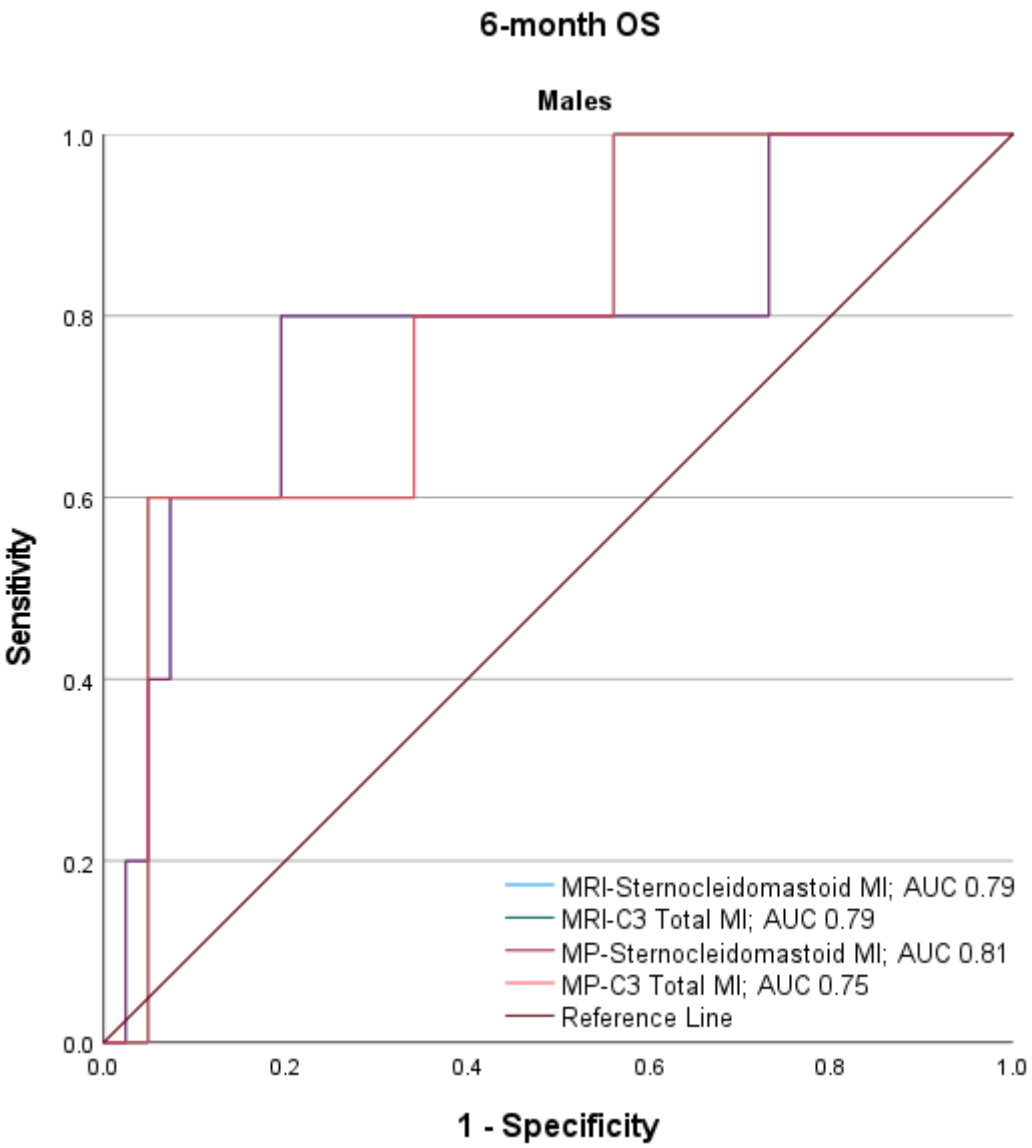
Supplementary materials

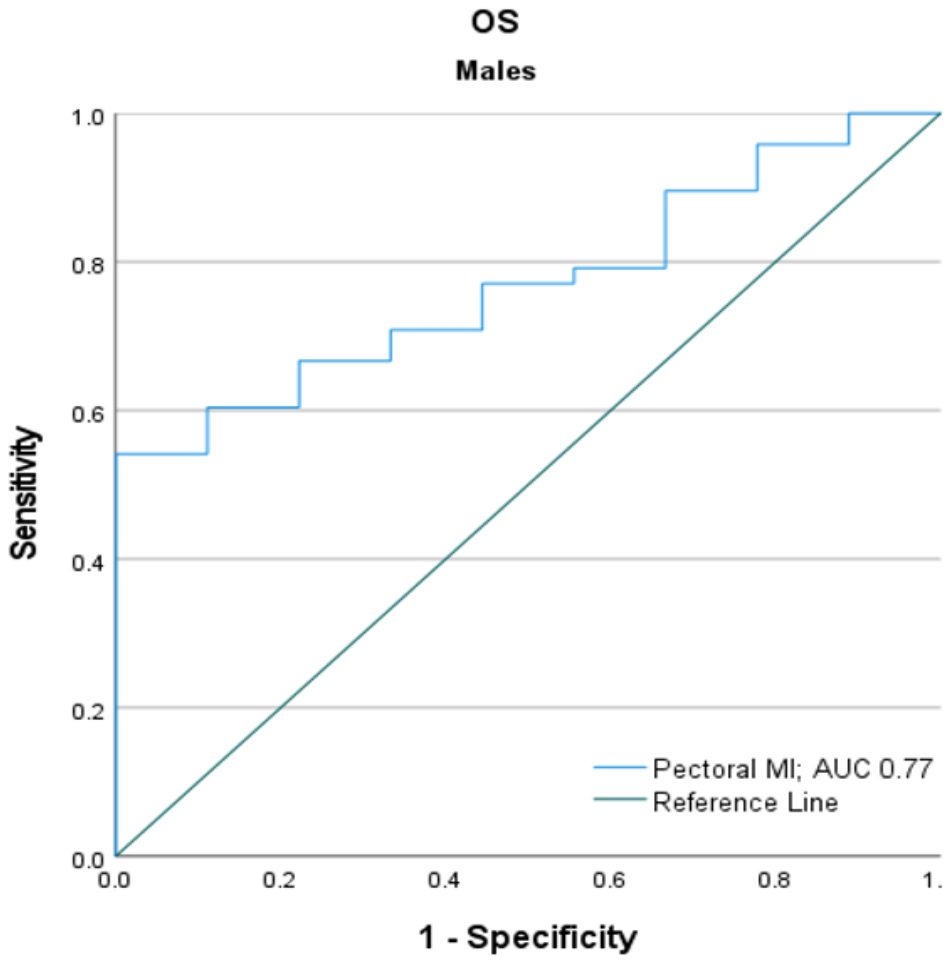



**Supplementary figure 1.** Patient selection flowchart




**Supplementary Figure 2.** Receiver operation characteristic curves for the prediction of 6-month survival in male patients. The analysis was performed for variables that were statistically significant predictors of 6-month OS in continuous variable Cox analysis.

Abbreviations: MP: MRI-preferred; MI: Muscle index; AUC: Area under curve




**Supplementary Figure 3.** Receiver operation characteristic curves for the prediction of overall survival in male patients. All variables that statistically significantly predicted overall survival were included in the ROC analysis.

Abbreviations: MI: Muscle index; AUC: Area under curve

**Supplementary Table 1.** Uni- and multivariate models with categorical variables describing the risk of death in male patients. Statistically significant values (P < 0.05) are bolded. The results are not presented for the indexes if the univariate model was not statistically significant.

| | | Categorical | | | | |
|---|---|---|---|---|---|---|
| | | Cutoff ($cm^2/m^2$) | Univariate | | Multivariate* | |
| | | | Normal muscle mass | Low muscle mass | Normal muscle mass | Low muscle mass |
| | | | | HR** (95% CI) | | HR** (95% CI) |
| **6-month survival** | MRI-Sternocleidomastoid MI | 1.73 | REF. | **13.40 (1.50, 120.05)** | REF. | **11.7 (1.29, 106.35)** |
| | MRI-Total C3 MI | 10.16 | REF. | **15.60 (2.60, 93.82)** | REF. | **19.9 (2.61, 152.00)** |
| | MP-Sternocleidomastoid MI | 1.73 | REF. | **11.49 (2.43, 54.28)** | REF. | **17.44 (2.17, 140.05)** |
| | MP-Total C3 MI | 10.04 | REF. | **9.60 (2.74, 33.47)** | REF. | **8.93 (2.36, 33.8)** |
| | CT-Sternocleidomastoid MI | 1.64 | REF. | **3.17 (0.42, 23.89)** | REF. | N/C |
| **Overall survival** | CT-Pectoral MI | 9.94 | REF. | **2.12 (1.17, 3.82)** | REF. | 1.79 (0.94, 3.41) |

Abbreviations: HR: Hazard ratio; CI: Confidence interval; MP: MRI-preferred; MI: Muscle index; N/C: Not computable

*Multivariate models were adjusted for age, stage, and grade.

**In categorical variables, HR represents the hazard ratios for "low" muscle index values compared to "normal" index values. Low and normal values were determined with survival-time-specific cutoffs.