**Supplementary Online Table 1.** NIRS-IVUS assessment of 4mm segment located proximally to the implanted stent

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Low lipid burden lesions (n=41) | |  | High lipid burden lesions (n=9) | |  |
| Parameters | Pre-stenting | Post-stenting | P | Pre-stenting | Post-stenting | P |
| 4mm long segment adjacent to the implanted stent | | | | | | |
| MLD (mm) | 2.50 (2.30, 2.90) | 2.71 (2.40, 2.92) | 0.381 | 2.13±0.40 | 2.68±0.37 | 0.047 |
| MLA (mm2) | 6.41 (5.52, 7.35) | 6.51 (5.57, 7.62) | 0.770 | 5.50±1.21 | 7.20±1.32 | 0.054 |
| Lumen Volume (mm3) | 30.92 (15.80, 39) | 33.40 (28.30, 40.00) | 0.328 | 25.00±5.20 | 35.51±9.18 | 0.021 |
| EEM volume (mm3) | 56.45 (49.90, 67.70) | 59.30 (53.40, 75.70) | 0.020 | 56.45 (52.17, 70.30) | 65 (58.45, 80.02) | 0.028 |
| ΔEEM Volume (mm3) | 1.30 (-2.3, 6.9) | |  | 8.70 (5.00, 11.10) | | 0.038 |
| Plaque Volume (mm3) | 28.35 (18.70, 35.40) | 28.75 (20.80, 37.00) | 0.185 | 32.50 (29.05, 41.02) | 33.20 (23.35, 40.05) | 0.600 |
| maxLCBI4mm | 34 (0.00, 207) | 0.00 (0.00, 45) | 0.049 | 50 (12, 287) | 40 (0, 380) | 0.893 |
| EEM area (mm2) | 12.70 (11.37, 16.15) | 13.20 (11.85, 17.00) | 0.091 | 12.12 (12.80, 14.65) | 13.95 (13.17, 18.07) | 0.030 |
| EEM Eccentricity | 0.10 (0.06, 0.13) | 0.08 (0.06, 0.12) | 0.676 | 0.83±0.03 | 0.11±0.05 | 0.107 |
| Lumen Eccentricity | 0.15 (0.11, 0.21) | 0.10 (0.08, 015) | 0.009 | 0.21±0.10 | 0.12±0.06 | 0.166 |
| Total plaque area (mm2) | 6.60 (4.85, 9.75) | 7.45 (6.30, 8.50) | 0.133 | 34.18±6.02 | 32.57±9.30 | 0.415 |
| Plaque Burden (%) | 52.12±13.20 | 53.50±9.47 | 0.201 | 57.96±10.41 | 51.70±12.0.4 | 0.277 |
| 1mm adjacent proximally to the stented segment: | | | | | | |
| EEM area (mm2) | 12.35 (11.5, 13.49) | 14.32 (14.04, 17.69) | 0.410 | 12.65 (11.73, 17.86) | 16.15 (13.00, 20.45) | 0.008 |
| EEM MLD (mm) | 3.98±0.72 | 4.12±0.63 | <0.001 | 4.12±0.52 | 4,37±0.50 | 0.020 |
| EEM Eccentricity | 0.11±0.04 | 0.10±0.04 | 0.401 | 0.09±0.04 | 0.13±0.05 | 0.070 |
| Lumen area (mm2) | 6.72 (6.01, 7.50) | 6.65 (5.83, 7.43) | 0.511 | 5.71±0.43 | 8.17±2,36 | 0.050 |
| Lumen MLD (mm) | 2.85 (2.75, 3.06) | 2.9 (2.76, 3.08) | 0.930 | 2.56±0.41 | 3.08±0.45 | 0.050 |
| Lumen Eccentricity | 0.13 (0.11, 0.17) | 0.09 (0.08, 0.10) | <0.001 | 0.21±0.12 | 0.10±0.06 | 0.090 |
| Total plaque area (mm2) | 6.30 (5.17, 7.85) | 7.05 (6.08, 8.43) | 0.005 | 7.28±1.70 | 8.75±3.43 | 0.151 |
| Plaque burden (%) | 45.48 (40.34, 51.55) | 51.75 (47.84, 55.76) | 0.030 | 56.53 (44.11, 72.59) | 54.45 (47.19, 55.77) | 0.500 |

ROI – region of interest, MLD – minimal lumen diameter, MLA – minimal lumen area, EEM – external elastic lamina,

maxLCBI4mm – maximal lipid core burden index in four millimeters, Δ - delta

**Supplementary Table Online 2.** NIRS-IVUS assessment of 4mm segment located distally to the implanted stent

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Low lipid burden lesions (n=41) | |  | High lipid burden lesions (n=9) | |  |
| Parameters | Pre-stenting | Post-stenting | P | Pre-stenting | Post-stenting | P |
| 4mm long segment adjacent distally to the implanted stent | | | | | | |
| MLD (mm) | 2.20 (2.00,2.32) | 2.30 (2.20, 2.50) | <0.010 | 2.31±0.50 | 2.31±0.51 | 1.000 |
| MLA (mm2) | 4.35 (4.00, 5.81) | 5.40 (4.50, 6.18) | 0.0004 | 5.73±1.87 | 5.24±3.36 | 0.509 |
| Lumen Volume (mm3) | 21.45 (19.78, 26.40) | 26.50 (23.32, 28.02) | 0.0002 | 25.77±6.08 | 27.30±7.85 | 0.589 |
| EEM volume (mm3) | 38.95 (37.32, 42.31) | 42.50 (39.62, 46.70) | <0.0001 | 40.40 (38.84, 49.06) | 43.40 (32.94,55.07) | 0.570 |
| ΔEEM Volume (mm3) | 4.20 (0.95, 7.45) | |  | 0.90 (-3.81, 7.17) | | 0.227 |
| Plaque Volume (mm3) | 15.30 (11.55, 20.55) | 16.20 (13.20, 19.96) | 0.537 | 18.45±9.19 | 17.97±7.84 | 0.796 |
| maxLCBI4mm | 0.00 (0.00, 60.70) | 0.00 (0.00, 36,72) | 0.710 | 76.00 (0.00, 151.31) | 21.50 (0.00,156,79) | 0.687 |
| EEM area (mm2) | 9.00 (8.20, 9.89) | 9.90 (8.33, 10.70) | 0.002 | 9.00 (8.05, 10.87) | 8.80 (7.64, 12.83) | 1.000 |
| EEM Eccentricity | 0.09 (0.07, 0.2) | 0.1 (0.08, 0.12) | 0.039 | 0.13±0.08 | 0.13±0.04 | 0.462 |
| Lumen Eccentricity | 0.09 (0.08, 0.14) | 0.12 (0.10, 0.13) | 0.609 | 0.14±0.08 | 0.21±0.12 | 0.035 |
| Total plaque area (mm2) | 3.90 (2.90, 5.3) | 4.00 (3.30, 4.99) | 0.412 | 4.86±2.59 | 4.47±2.37 | 0.614 |
| Plaque Burden (%) | 43.14±8.28 | 42.05±13.48 | 0.592 | 38.38±11.84 | 41.65±14.02 | 0.163 |
| 1mm adjacent distally to the implanted stent | | | | | | |
| EEM area (mm2) | 9.35 (8.39, 10.31) | 11.00 (9.79, 12.01) | <0.001 | 9.40 (8.26, 12.09) | 11.71 (9.4, 14.48) | 0.039 |
| EEM MLD (mm) | 3.42 (3.29, 3.6) | 3.70 (3.55, 3.91) | <0.001 | 3.51 (3.30, 3.88) | 3.90 (3.41, 4.27) | 0.039 |
| EEM Eccentricity | 0.08 (0.06, 0.11) | 0.07 (0.06, 0.11) | 0.391 | 0.14±0.09 | 0.12±0.04 | 0.180 |
| Lumen area (mm2) | 5.31 (4.28, 6.35) | 6.40 (5.52, 6.73) | <0.001 | 5.57±2.06 | 7.31±1.85 | 0.160 |
| Lumen MLD (mm) | 2.54 ±0.57 | 2.92±0.42 | <0.001 | 2.65±0.49 | 3.02±0.40 | 0.200 |
| Lumen Eccentricity | 0.10 (0.08, 0.12) | 0.09 (0.08, 0.11) | 0.871 | 0.10 (0.07, 0.18) | 0.13 (0.07, 0.19) | 0.460 |
| Total plaque area (mm2) | 3.85 (3.03, 4.73) | 4.85 (4.46, 5.40) | 0.016 | 4.61±2.47 | 5.40±2.44 | 0.538 |
| Plaque burden (%) | 45.07±16.39 | 43.14±8.28 | 0.370 | 51.0±17.84 | 38.39±11.85 | 0.770 |

ROI – region of interest, MLD – minimal lumen diameter, MLA – minimal lumen area, EEM – external elastic lamina,

maxLCBI4mm – maximal lipid core burden index in four millimeters, Δ - delta