

## **SUPPLEMENTARY DATA**

### **Supplementary methods**

#### **Percutaneous coronary intervention, angiographic analysis, and optical coherence tomography**

Catheter was advanced 10 mm distal to the stent evaluated. During acquisition (20 mm/s speed automated pullback, and 54 mm length) blood was removed with automated contrast injection. The off-line analysis of the images obtained was conducted in the adjacent stent segments—5 mm proximal and 5 mm distal and throughout the complete length of the stent—with 1 mm intervals. Intimal coverage was measured as the perpendicular distance between the luminal surface of the neointima and the struts.

#### **Statistical analysis**

For sample size estimate purposes, we accepted an alpha risk of 0.05 and a beta risk of 0.2 in a two-sided test. A total of 24 subjects were needed in each group to recognize as statistically significant a minimum difference of 2.5 units between any pair of groups assuming 3 groups existed. The common deviation was assumed to be 2.5. Inclusion was extended due to the potential patient loss at follow-up.

**Table 1 of the supplementary data**

## Angiographic analysis

|                               | Polymer-free BES<br>(N = 44) | Biodegradable-<br>polymer EES (N =<br>35) | Durable-polymer EES<br>(N = 25) | P    |
|-------------------------------|------------------------------|---|---------------------------------|------|
| <i>Preoperative</i>           |                              |   |                                 |      |
| Lesion length, mm             | 12.34 ± 4.30                 | 11.11 ± 4.28                              | 11.62 ± 2.93                    | .556 |
| Reference vessel diameter, mm | 3.07 ± 0.45                  | 2.70 ± 0.63                               | 2.90 ± 0.68                     | .108 |
| Minimal lumen diameter, mm    | 0.75 ± 0.58                  | 0.93 ± 0.42                               | 0.98 ± 0.45                     | .117 |
| Percent diameter stenosis, %  | 73.32 ± 22.13                | 64.65 ± 15.29                             | 66.01 ± 12.92                   | .085 |
| <i>Postoperative</i>          |                              |   |                                 |      |
| Stent length, mm              | 18.75 ± 4.99                 | 2.01 ± 6.13                               | 18.83 ± 4.81                    | .552 |
| Minimal lumen diameter, mm    | 2.74 ± 0.43                  | 2.65 ± 0.41                               | 2.57 ± 0.40                     | .258 |
| Reference lumen diameter, mm  | 2.90 ± 0.54                  | 2.91 ± 0.48                               | 2.80 ± 0.50                     | .690 |
| Percent diameter stenosis, %  | 4.59 ± 11.26                 | 8.24 ± 8.10                               | 7.76 ± 7.60                     | .195 |

Data are expressed as no. (%) or mean ± standard deviation.

BES, biolimus-eluting stent; EES, everolimus-eluting stent.

Table 2 of the supplementary data

## Optical coherence tomography analysis

| Follow-up                                   | Polymer-free BES   |                      |        | Biodegradable-polymer EES |                      |      | Durable-polymer EES |                      |      | P <sup>a</sup> | P <sup>b</sup> |
|---|--------------------|----------------------|--------|---------------------------|----------------------|------|---------------------|----------------------|------|----------------|----------------|
|   | 1-month<br>(N = 7) | 6-months<br>(N = 35) | P      | 1-month<br>(N = 17)       | 6-months<br>(N = 15) | P    | 1-month<br>(N = 12) | 6-months<br>(N = 12) | P    |                |                |
| <b>Qualitative data</b>                     |                    |                      |        |                           |                      |      |                     |                      |      |                |                |
| <i>Neointimal pattern</i>                   |                    |                      |        |                           |                      |      |                     |                      |      |                |                |
| Absent                                      | 4 (57.1)           | 3 (8.6)              | .003   | 12 (7.6)                  | 3 (2.0)              | .016 | 7 (58.3)            | 2 (16.7)             | .068 | .810           | .052           |
| Homogeneous                                 | 1 (14.3)           | 29 (82.9)            |        | 3 (17.6)                  | 9 (6.0)              |      | 3 (25.0)            | 6 (5.0)              |      |                |                |
| Heterogeneous                               | 1 (14.3)           | 1 (2.9)              |        | 1 (5.9)                   | 3 (2.0)              |      | 2 (16.7)            | 1 (8.3)              |      |                |                |
| Layered                                     | 1 (14.3)           | 2 (5.7)              |        | 1 (5.9)                   | 0                    |      | 0                   | 3 (25.0)             |      |                |                |
| <i>Major coronary evaginations</i>          | 5 (71.4)           | 1 (2.9)              | < .001 | 6 (35.3)                  | 6 (4.0)              | .784 | 2 (16.7)            | 3 (25.0)             | .615 | .056           | .003           |
| <i>RUTTS ≥ 30%</i>                          | 6 (85.7)           | 7 (2.0)              | .001   | 12 (7.6)                  | 4 (26.7)             | .013 | 10 (83.3)           | 6 (5.0)              | .083 | .613           | .132           |
| <i>Uncovered struts ≥ 5%</i>                | 6 (85.7)           | 5 (15.2)             | < .001 | 14 (82.4)                 | 5 (33.3)             | .005 | 10 (83.3)           | 6 (5.0)              | .083 | .980           | .052           |
| <i>ISA</i>                                  | 6 (85.7)           | 3 (8.6)              | < .001 | 11 (64.7)                 | 7 (46.7)             | .305 | 10 (83.3)           | 5 (41.7)             | .035 | .400           | .005           |
| <i>Malapposed struts ≥ 5%</i>               | 2 (28.6)           | 0                    | .002   | 5 (29.4)                  | 1 (6.7)              | .100 | 4 (33.3)            | 1 (8.3)              | .132 | .967           | .274           |
| <b>Quantitative data</b>                    |                    |                      |        |                           |                      |      |                     |                      |      |                |                |
| <i>Stent length, mm</i>                     | 19.9 ± 5.5         | 2.4 ± 5.8            | .828   | 19.7 ± 6.4                | 18.8 ± 6.1           | .689 | 2.4 ± 4.3           | 19.4 ± 6.0           | .653 | .954           | .656           |
| <i>Reference lumen area, mm<sup>2</sup></i> | 8.8 ± 1.8          | 8.7 ± 2.9            | .907   | 7.6 ± 3.0                 | 8.1 ± 3.1            | .666 | 8.5 ± 4.2           | 7.7 ± 2.5            | .590 | .658           | .564           |
| <i>Lumen area, mm<sup>2</sup></i>           |                    |                      |        |                           |                      |      |                     |                      |      |                |                |
| Minimal                                     | 6.4 ± 1.3          | 6.0 ± 1.9            | .618   | 5.6 ± 1.9                 | 5.9 ± 2.1            | .736 | 6.0 ± 2.7           | 5.1 ± 1.6            | .353 | .700           | .380           |
| Mean  | 8.3 ± 1.4          | 7.4 ± 2.1            | .288   | 7.1 ± 2.4                 | 7.2 ± 2.2            | .881 | 7.4 ± 3.3           | 6.6 ± 1.7            | .481 | .607           | .603           |
| <i>Stent area, mm<sup>2</sup></i>           |                    |                      |        |                           |                      |      |                     |                      |      |                |                |
| Minimal                                     | 7.0 ± 1.3          | 7.5 ± 2.2            | .611   | 6.2 ± 2.0                 | 6.8 ± 2.0            | .374 | 6.2 ± 2.6           | 5.9 ± 1.7            | .797 | .650           | .089           |
| Mean  | 8.6 ± 1.5          | 8.6 ± 2.4            | .945   | 7.4 ± 2.5                 | 8.0 ± 2.2            | .510 | 7.4 ± 2.9           | 7.2 ± 1.7            | .870 | .529           | .153           |
| <i>Mean ISA area, mm<sup>2</sup></i>        | 0.1 ± 0.1          | 0.0 ± 0.0            | < .001 | 0.2 ± 0.3                 | 0.0 ± 0.1            | .131 | 0.3 ± 0.5           | 0.1 ± 0.2            | .190 | .375           | .009           |
| <i>Mean neointimal area, mm<sup>2</sup></i> | 0.5 ± 0.3          | 1.3 ± 0.7            | < .001 | 0.5 ± 0.3                 | 0.8 ± 0.5            | .045 | 0.3 ± 0.1           | 0.7 ± 0.3            | .002 | .191           | .008           |
| <i>Mean neointimal obstruction, %</i>       | 5.9 ± 2.8          | 15.0 ± 7.4           | .003   | 6.8 ± 3.3                 | 1.6 ± 7.8            | .072 | 4.8 ± 1.8           | 1.5 ± 5.1            | .001 | .174           | .065           |
| <i>Area stenosis, %</i>                     | 25.6 ± 16.1        | 29.1 ± 14.2          | .573   | 24.4 ± 16.8               | 27.2 ± 15.8          | .637 | 27.3 ± 11.4         | 31.7 ± 16.7          | .458 | .877           | .739           |

Data are expressed as no. (%) or mean ± standard deviation. Categorical variables were estimated using the chi-square test. Quantitative variables were estimated using the one-way ANOVA test. Strut level analyses was conducted using generalized estimating equations considering the clustering nature of OCT data.

BES, biolimus-eluting stent; EES, everolimus-eluting stent; ISA, incomplete stent apposition; RUTTS, ratio of uncovered to total stent struts.

<sup>a</sup> comparison at 1-month follow-up.

<sup>b</sup> comparison at 6-month follow-up.