**Supplementary Table 1.** **The definitions of high bleeding risk and outcomes of each study.**

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| --- | --- | --- |
| **Studies** | **High bleeding risk criteria** | **Outcome** |
| **XIENCE 28** | **Patients had to meet at least 1 of the following HBR criteria:**   1. Age≥75 years; 2. Indication for long-term anticoagulant therapy; 3. History of major bleeding in the previous 12 months; 4. History of ischemic or hemorrhagic stroke; 5. Renal insufficiency defined as creatinine ≥ 2.0 mg/dL or maintenance dialysis; 6. Anemia with hemoglobin < 11 g/dL; 7. Systemic conditions associated with an increased risk for bleeding, including hematologic disorders such as thrombocytopenia (platelet count < 100,000/mm3) and coagulation disorders. | ***Primary outcome:***  All-cause death/all MI (modified ARC).  ***Secondary outcomes:***  All-cause death, all MI, cardiac death/all MI (modified ARC), ST (ARC definite/probable), major bleeding rate (BARC type 2-5), major bleeding rate (BARC type 3-5), ischemic or hemorrhagic stroke, clinically-indicated target lesion revascularization, clinically-indicated target vessel revascularization, target lesion failure, target vessel failure. |
| **XIENCE 90** | **Patients had to meet at least 1 of the following HBR criteria:**   1. Age≥75 years; 2. Indication for long-term anticoagulant therapy; 3. History of major bleeding in the previous 12 months; 4. History of ischemic or hemorrhagic stroke; 5. Renal insufficiency defined as creatinine ≥ 2.0 mg/dL or maintenance dialysis; 6. Anemia with hemoglobin < 11 g/dL; 7. Systemic conditions associated with an increased risk for bleeding, including hematologic disorders such as thrombocytopenia (platelet count < 100,000/mm3) and coagulation disorders. | ***Primary outcome:***  All-cause death/all MI (modified ARC).  ***Secondary outcomes:***  All-cause death, all MI, cardiac death/all MI (modified ARC), ST (ARC definite/probable), major bleeding rate (BARC type 2-5), major bleeding rate (BARC type 3-5), ischemic or hemorrhagic stroke, clinically-indicated target lesion revascularization, clinically-indicated target vessel revascularization, target lesion failure, target vessel failure. |
| **TWILIGHT -HBR** | **Patients were considered as HBR if they fulfilled at least one major or two minor criteria as defined by the ARC-HBR consensus statement.**  ***Major criteria:***   1. severe or end-stage CKD (eGFR < 30 mL/min/1.73 m2 or dialysis); 2. Moderate or severe anemia (hemoglobin < 11 g/dL); 3. Moderate or severe thrombocytopenia (platelet count < 100×109 /L); 4. Liver disease; 5. Previous major bleeding (prior major bleeding requiring transfusion or hospitalization)   ***Minor criteria:***   1. Age > 75 years; 2. moderate CKD (eGFR > 30 and < 60 mL/min/1.73 m2); 3. Mild anemia (hemoglobin > 11 and < 13 g/dL for men and > 11 and < 12 g/dL for women); 4. Non-steroidal anti-inflammatory drug use. | ***Primary outcome:***  BARC type 2, 3, or 5 bleeding.  ***Secondary outcomes:***  All-cause death/MI/stroke, cardiovascular death/MI/ischemic stroke, all-cause death, cardiovascular death, MI, ischemic stroke, ST (definite/probable), BARC type 3 or 5 bleeding, TIMI major bleeding, GUSTO moderate or severe bleeding, ISTH major bleeding. |
| **EVOLVE Short DAPT** | **Patients with HBR were enrolled if they met at least one of the following inclusion criteria:**   1. Age ≥ 75 years and in the opinion of the investigator, the anticipated risk of bleeding associated with > 3 months of DAPT outweighed the anticipated benefit; 2. Need for chronic or lifelong anticoagulation; 3. History of major bleeding within 12 months of the index procedure (severe/life-threatening or moderate bleeding based on GUSTO classification); 4. History of ischemic or hemorrhagic stroke; 5. Renal insufficiency (creatinine ≥ 2.0 mg/dL) or failure (dialysis dependent); 6. Platelet count ≤ 100 000 /μL. | ***Primary outcomes:***  All cause death/MI, definite/probable ST.  ***Secondary outcomes:***  BARC types 2, 3, and 5 bleeding, major adverse cardiac and cerebrovascular events (all death, MI, and ischemic or hemorrhagic stroke), major adverse cardiac events (cardiac death, MI, and target vessel revascularization), target vessel failure (cardiac death, target vessel-related MI, and target vessel revascularization). |
| **MASTER DAPT** | **Patients are at HBR if at least one of the following criteria applies:**   1. Clinical indication for treatment with oral anticoagulant (OAC) for at least 12 months; 2. Recent (<12 months) nonaccess site bleeding episode(s) that required medical attention (i.e., actionable bleeding); 3. Previous bleeding episode(s) that required hospitalization if the underlying cause had not been definitively treated (i.e., surgical removal of the bleeding source); 4. Age ≥75 years; 5. Systemic conditions associated with an increased bleeding risk (e.g., hematological disorders, including a history of current thrombocytopenia defined as a platelet count < 100.00/ mm3 (< 100×109/L) or any known coagulation disorder associated with increased bleeding risk; 6. Documented anemia, defined as repeated hemoglobin levels < 11 g/dL or transfusion during the 4 weeks before inclusion; 7. Need for chronic treatment with steroids or nonsteroidal anti-inflammatory drugs; 8. Diagnosed malignancy (other than skin) considered at high bleeding risk including gastrointestinal, genitourinary/renal and pulmonary; 9. Stroke at any time or transient ischemic attack in the previous 6 months; 10. PRECISE-DAPT score a ≥ 25. | ***Primary outcomes:***  Net adverse clinical events (a composite of all-cause death, MI, stroke, or BARC type 3 or 5), major adverse cardiac or cerebral events (a composite of all-cause death, MI, or stroke), and BARC type 2, 3 or 5.  ***Secondary outcomes:***  Cardiovascular death/MI/stroke, all-cause death, definite or probable ST, ischemic or hemorrhagic stroke, all bleeding events (BARC types 1-5, TIMI minor or major bleeding, GUSTO moderate or severe bleeding events). |
| **STOPDAPT-2** | **Patients were regarded as HBR if having at least one major criterion or two minor criteria of ARC-HBR. The authors modified the ARC-HBR definitions, because some criteria of ARC-HBR were not exactly captured in the STOPDAPT-2 trial.**  ***Major criteria:***   1. Long-term anticoagulation (the usage of oral anticoagulants was one of the exclusion criteria); 2. Severe CKD (eGFR < 30 mL/min); 3. Severe anemia (hemoglobin < 11 g/dL); 4. Thrombocytopenia (platelet count < 100\*109 /L); 5. Liver cirrhosis (regardless of the presence of portal hypertension); 6. Previous hemorrhagic strokes (history of intracranial bleeding was regarded as major criteria regardless of its etiology, although the investigators did not have information whether it was traumatic or spontaneous); 7. Plan of surgery (planned major surgery was included as major criteria, regardless of whether the procedure was deferrable or not).   ***Minor criteria:***   1. Age ≥ 75 years; 2. Moderate CKD (eGFR 30–59 mL/min); 3. Moderate anemia (hemoglobin > 11 and < 13 g/dL for men and > 11 and < 12 g/dL for women); 4. Prior bleeding (all previous bleeding history was regarded as minor criterion, because the investigators did not have information on the timing, requirement of hospitalization or transfusion, and recurrence for previous history of spontaneous bleeding); 5. Prior ischemic stroke (history of stroke was regarded as minor criterion, because the investigators did not have information on its timing). | ***Primary outcome:***  Cardiovascular death/MI/definite ST/stroke/TIMI major or minor bleeding.  ***Secondary outcomes:***  Cardiovascular death/MI/definite ST/stroke, TIMI major or minor bleeding, all-cause death, MI, definite or probable ST, ischemic or hemorrhagic stroke, BARC 3 or 5 bleeding, TIMI major or minor bleeding, GUSTO moderate or severe bleeding, revascularization, major adverse cardiac events (cardiac death, MI, or clinically driven target lesion revascularization) |
| HBR, high bleeding risk; ARC-HBR, Academic Research Consortium for High Bleeding Risk: CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; GUSTO, Global Utilization of Streptokinase and Tissue plasminogen activator for Occluded coronary arteries; MI, myocardial infarction; ARC, Academic Research Consortium; ST, stent thrombosis; BARC, Bleeding Academic Research Consortium; TIMI, thrombolysis in myocardial infarction; ISTH, International Society on Thrombosis and Hemostasis.  a Scores on the PRECISE-DAPT, in which the components are the patient’s age, previous bleeding, hemoglobin level, white-cell count, and creatinine clearance, range from 0 to 100. Patients with a score of 25 or higher are at high risk for bleeding. | | |

**Supplementary Table 2. Procedural Characteristics.**

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| --- | --- | --- | --- | --- | --- | --- |
| **Characteristics** | **XIENCE 28** | **XIENCE 90** | **TWILIGHT -HBR** | **EVOLVE Short DAPT** | **MASTER DAPT** | **STOPDAPT-2** |
| Arterial access site (%) | | | | | | |
| Femoral | - | - | - | - | 15.7/12/8 | 18.4/15.8 |
| Radial | 70.8/4.0 | 52.2/4.0 | 63.1/60.6 | - | 84.1/86.9 | 72.2/76.5 |
| Brachial | - | - | - | - | 0.2/0.3 | 10.7/7.7 |
| Number of lesions per patient | 1.2/1.3 | 1.2/1.3 | 1.6/1.5 | 1.3/1.3 | - | 1.14/1.16 |
| Number of stents per patient | 1.2/1.4 | 1.3/1.4 | - | - | 1.74/1.76 | - |
| Baseline Maximum % DS | 82.5/83.4 | 83.8/82.9 | - | 84.1/84.0 | - | - |
| Target vessel (%) | | | | | | |
| LMCA | - | - | 5.6/7.0 | - | 5.5/5.9 | 5.7/2.9 |
| LAD | 51.7/46.8 | 48.1/47.8 | 58.2/53.0 | 50.9/5..6 | 54.0/55.6 | 49.6/54.8 |
| CX | 27.4/29.5 | 28.3/29.1 | 33.4/33.1 | - | 28.4/30.2 | 17.3/19.5 |
| RCA | 32.8/34.7 | 34.1/34.5 | 32.8/35.7 | - | 37.2/35.3 | 33.7/31.4 |
| Graft | - | - | - | - | 1.7/1.7 | - |
| Target of bifurcation (%) | 11.6/9.9 | 7.6/9.9 | 14.2/10.7 | - | 3.6/4.4 | 27.8/26.0 |
| Target of 2 vessels or more (%) | - | - | - | - | 25.2/27.8 | 9.7/9.0 |
| Data are shown as groups with short/standard DAPT.  DS, diameter stenosis; LMCA, left main coronary artery; LAD, left anterior descending artery; CX, circumflex artery; RCA, right coronary artery. | | | | | | |

**Supplementary Figure 1. Subgroup analysis of primary and secondary endpoints. (A) major bleeding, (B) definite or probable stent thrombosis, (C) myocardial infarction.**



**Supplementary Table 3. Primary and secondary outcomes between short and standard DAPT groups.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcomes** | **XIENCE 28** | | **XIENCE 90** | | **TWILIGHT -HBR** | | **EVOLVE Short DAPT** | | **MASTER DAPT** | | **STOPDAPT-2** | | **Risk Ratio (95% CI)** | ***P*** | **I2 (%)** | ***P*heterogeneity** |
| Short DAPT | Standard DAPT | Short DAPT | Standard DAPT | Short DAPT | Standard DAPT | Short DAPT | Standard DAPT | Short DAPT | Standard DAPT | Short DAPT | Standard DAPT |
| Primary outcomes | | | | | | | | | | | | | | | | |
| Major bleeding | 33/1392 (2.4) | 49/1411 (3.5) | 41/1693 (2.4) | 53/1280 (411) | 8/521 (1.5) | 27/543 (5.0) | 30/1032 (2.9) | 31/1333 (2.3) | 53/2295 (2.3) | 59/2284 (2.6) | 3/496 (0.6) | 18/558 (3.2) | 0.64  (0.44, 0.95) | 0.03 | 70 | 0.006 |
| Definite or probable ST | 4/1392 (0.3) | 4/1411 (0.3) | 4/1693 (0.2) | 4/1280 (0.3) | 4/516 (0.8) | 3/535 (0.6) | 4/1457 (0.3) | 4/1502 (0.3) | 14/2204 (0.6) | 8/2230 (0.4) | 1/496 (0.2) | 0/558 (0) | 1.31  (0.77, 2.23) | 0.32 | 0 | 0.89 |
| Myocardial Infarction | 24/1392 (1.7) | 25/1411 (1.8) | 48/1693 (2.8) | 28/1280 (2.2) | 23/516 (4.5) | 19/535 (3.6) | 27/1457 (1.9) | 32/1502 (2.1) | 59/2204 (2.7) | 46/2230 (2.1) | 6/496 (1.2) | 3/558 (0.5) | 1.17  (0.95, 1.45) | 0.14 | 0 | 0.68 |
| Secondary outcomes | | | | | | | | | | | | | | | | |
| All-cause death | 23/1392 (1.7) | 27/1411 (1.9) | 54/1693 (3.2) | 32/1280 (2.5) | 12/516 (2.3) | 16/535 (3.0) | 62/1457 (4.3) | 51/1502 (3.4) | 72/2204 (3.3) | 79/2230 (3.5) | 13/496 (2.6) | 12/558 (2.2) | 1.05  (0.88, 1.27) | 0.57 | 0 | 0.61 |
| Ischemic stroke | 3/1392 (0.2) | 3/1411 (0.2) | 19/1693 (1.1) | 2/1280 (0.2) | 2/516 (0.4) | 1/535 (0.2) | 17/1457 (1.2) | 7/1502 (0.5) | 10/2204 (0.5) | 17/2230 (0.8) | 5/496 (1.0) | 11/558 (2.0) | 1.37  (0.59, 3.17) | 0.47 | 66 | 0.01 |
| Data are shown as groups with short/standard DAPT (%).  DAPT, dual antiplatelet therapy; ST, stent thrombosis. | | | | | | | | | | | | | | | | |

**Supplementary Figure 2. The funnel plots of primary and secondary endpoints. (A) major bleeding, (B) definite or probable stent thrombosis, (C) myocardial infarction, (D) all-cause death, (E) ischemic stroke.**

