

### BLEEDING SEVERITY AFTER PERCUTANEOUS CORONARY INTERVENTION

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#### PURPOSE

- To identify predictors of hemoglobin (Hgb) drop between admission and discharge of patients undergoing percutaneous coronary intervention (PCI).
- To describe the relationship between a change in Hgb on the risk of death and other adverse events including major adverse cardiac events (MACE), and target vessel failure (TVF).

#### METHODS

- Assessment of Dual Antiplatelet Therapy With Drug-Eluting Stents (ADAPT-DES) was a prospective, multicenter, observational study.
- The study included 8,582 all-comers patients enrolled at 11 hospital sites in the U.S. and Germany.
  - Of 8,582 patients, 7,608 had information on pre- and post-procedure Hgb values.
- Enrollment included patients who were successfully treated with at least 1 drug-eluting stent and who were loaded with aspirin and clopidogrel.
- Clinical follow-up occurred at 30 days, 1 year, and 2 years.
- Patients were grouped into 5 categories according to  $\Delta\text{Hgb} < 1.0$  g/dL,  $\geq 1.0$  to  $< 2.0$  g/dL  $\Delta\text{Hgb}$ ,  $\geq 2.0$  to  $< 3.0$  g/dL  $\Delta\text{Hgb}$ ,  $\geq 3.0$  to  $< 4.0$  g/dL  $\Delta\text{Hgb}$ , or  $\geq 4.0$  g/dL  $\Delta\text{Hgb}$ .

#### RESULTS

- In total, 5,985 (78.7%) patients had a drop in Hgb.
- 2,684 (35.3%) patients had  $\Delta\text{Hgb} < 1.0$  g/dL, 2,338 (30.7%)  $\geq 1.0$  to  $< 2.0$  g/dL, 745 (9.8%)  $\geq 2.0$  to  $< 3.0$  g/dL, 143 (1.9%)  $\geq 3.0$  to  $< 4.0$  g/dL, and 73 (1.0%)  $\geq 4.0$  g/dL.
- Patients who experienced bleeding complications with  $\Delta\text{Hgb} \geq 3.0$  to  $< 4.0$  g/dL and  $\Delta\text{Hgb} \geq 4.0$  g/dL were associated with an increased risk in dying and MACE.
- The risk of dying within two years was 9.8% with  $\Delta\text{Hgb}$ ,  $\geq 4.0$  g/dL.

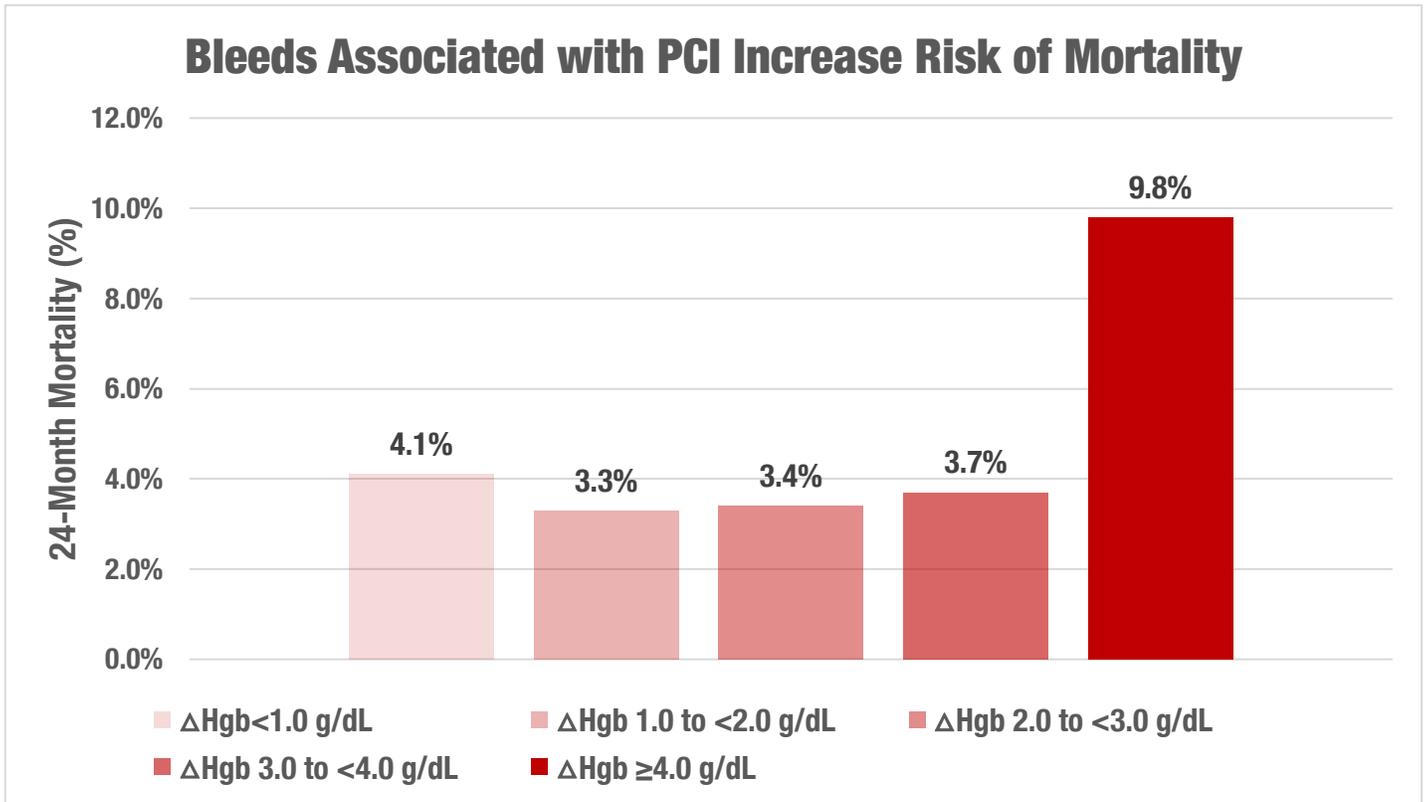
#### AUTHOR CONCLUSIONS

- Bleeding events that result in  $\Delta\text{Hgb} \geq 4.0$  g/dL are associated with significant increase risk of dying.
- Future studies should build on defining what constitutes a clinically significant bleeding event.

**Indications for Use.** The Early Bird is indicated for the introduction of catheters, catheter balloons, and other diagnostic and interventional devices into the femoral artery or femoral vein while maintaining hemostasis during diagnostic and interventional endovascular procedures.

**Contraindications.** There are no known contraindications for Early Bird.

### BLEEDING SEVERITY AFTER PERCUTANEOUS CORONARY INTERVENTION (Continued)



#### KEY POINTS

- This study underscores the importance of in-hospital bleeding avoidance strategies in patients with ischemic heart disease who undergo PCI.
- Incorporation of early bleed detection technology before one unit of blood loss may have the potential to reduce mortality risk in patients undergoing PCI.