



Outcomes Following Discontinuation of Warfarin in Heartmate 3 Patients: A Multi-Center Review

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Background

Bleeding complications during left ventricular assist device (LVAD) support pose anticoagulation challenges as risk of discontinuation of anticoagulation, even in the setting of bleeding, may pose an increased risk of subsequent LVAD hemolysis or thrombosis. We assessed whether discontinuation of anticoagulation in HM3 patients whose bleeding concerns preventing anticoagulation would adversely impact outcomes.

Methods

This multi-center, retrospective review included HeartMate 3 patients implanted between November 2016 and July 2019 for whom warfarin was discontinued. Patient characteristics, reason for anticoagulation discontinuation and subsequent adverse events were collected for all patients. The primary outcome was incidence of pump thrombosis. Secondary outcomes included bleeding events and overall survival.

Figure 1: Time off Warfarin

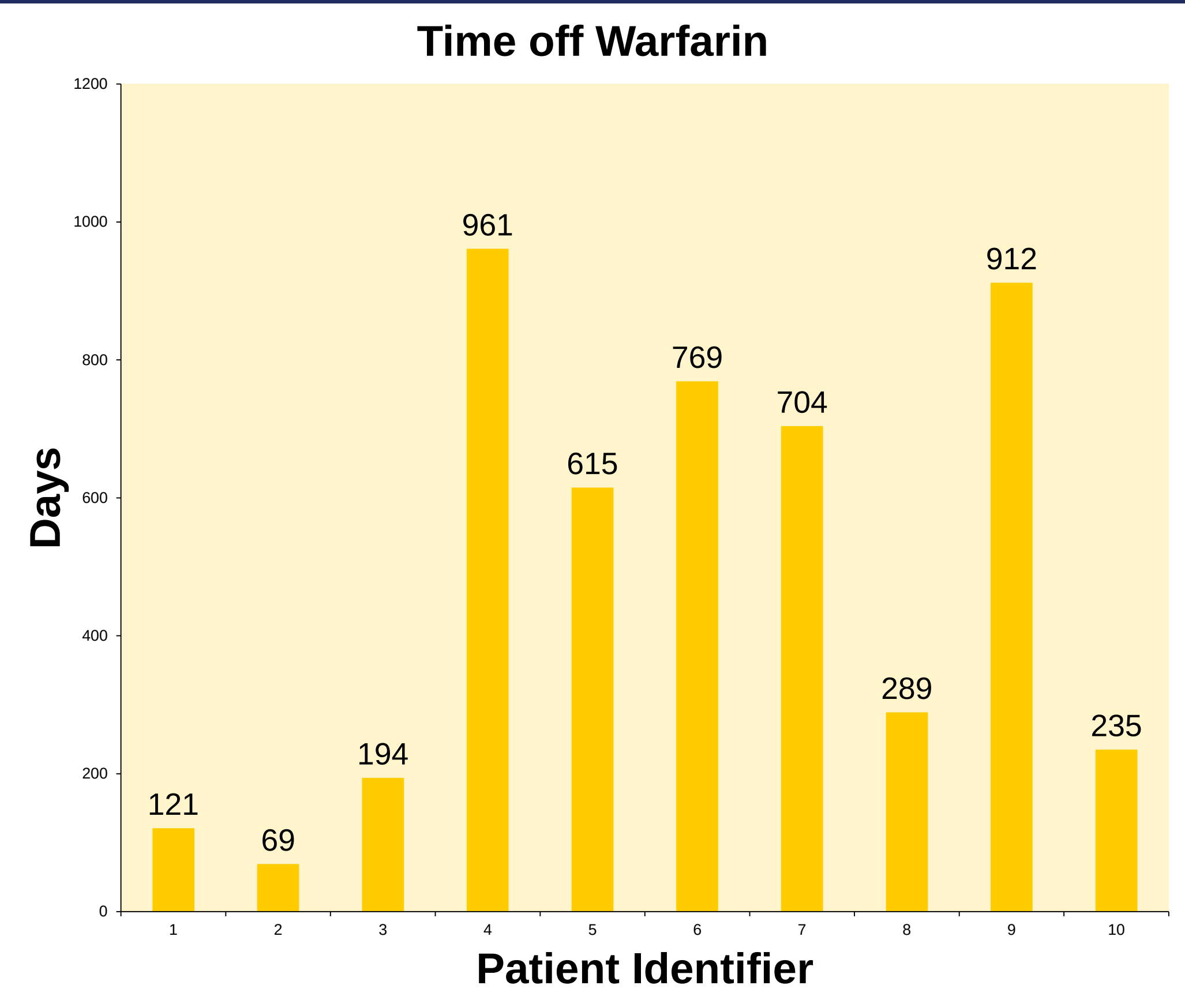
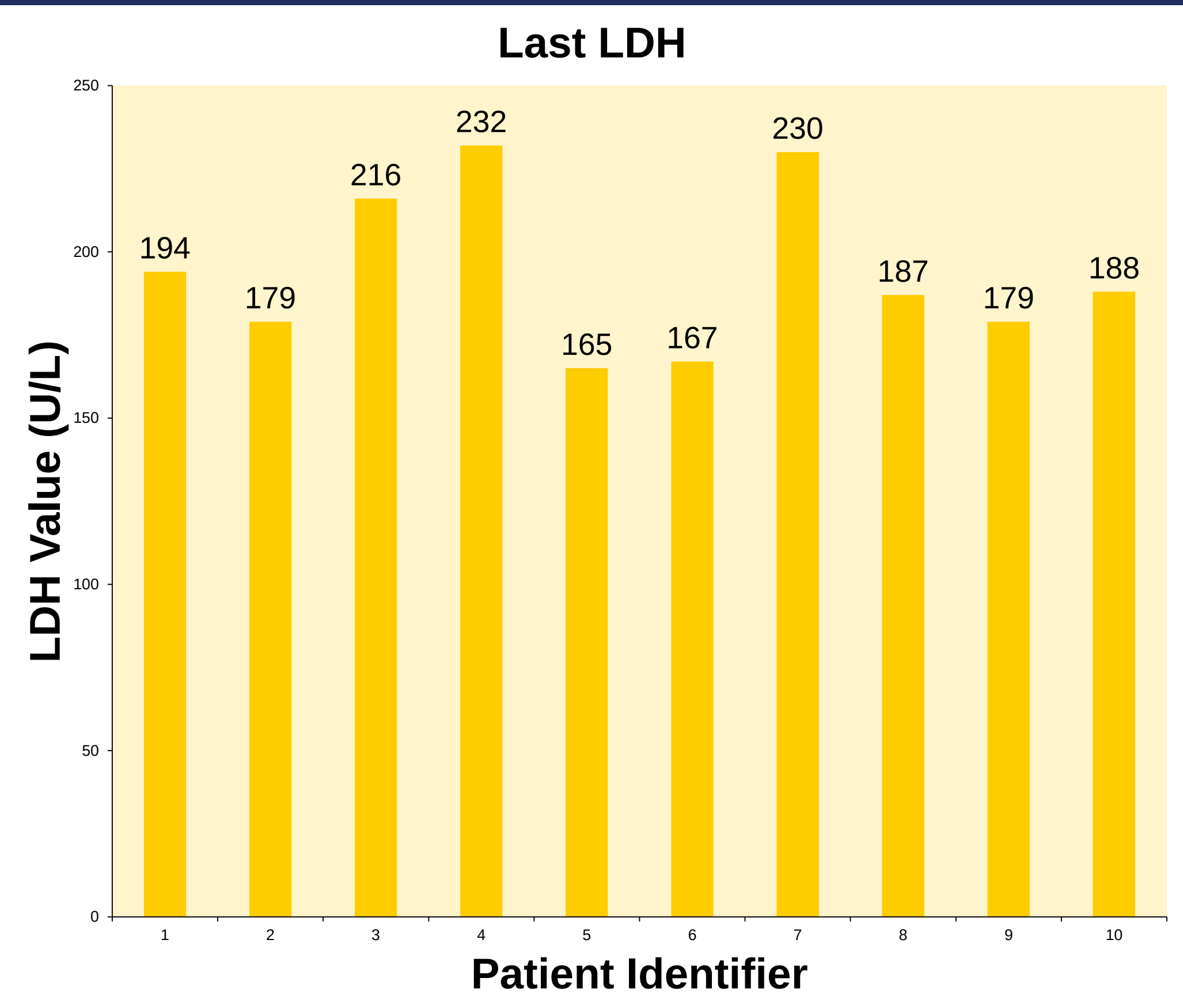


Figure 2: Last LDH



Results

❖ Ten patients were analyzed

- ❖ 80% male
- ❖ 70% ischemic cardiomyopathy
- ❖ 80% destination therapy

❖ Preoperatively, three patients required warfarin and 3 had a prior history of gastrointestinal bleeding (GIB).

❖ Reasons for anticoagulation discontinuation post HM3 placement included:

- ❖ GIB (N=5)
- ❖ Hemorrhagic CVA (N=3)
- ❖ Gross hematuria (N=1),
- ❖ Hemothorax (N=1)
- ❖ Allergy (N=1)

❖ Four patients had concomitant Aspirin discontinuation.

❖ Time supported with HM3 off anticoagulation ranged from 69 to 961 days, representing 4,869 patient-days in total (Figure 1).

❖ During this follow-up time:

- ❖ One patient experienced an embolic CVA attributed to left atrial appendage clot with subsequent hemorrhagic transformation
- ❖ One patient required device exchange for thrombosis.
- ❖ Bleeding also remained a common adverse event (N=5) despite the lack of anticoagulation.

Conclusions

- ❖ These data highlight the complicated hemocompatibility challenges associated with long-term LVAD support in a sub-group of patients.
- ❖ Discontinuation of both Aspirin and Warfarin can be considered in a select group of HM3 patients, but with judicious monitoring for early signs of adverse events.