Gastrointestinal (GI) bleeding is common in the United States, requiring hospitalization in 223 per 100,000 people each year (Laine 2012). In hemodynamically stable patients, our diagnostic workflow in the emergency department typically begins with CTA abdominopelvis after physical exam. Previously, our CTA protocol for GI bleeding (GIB CTA) included 3 separate acquisitions performed at single energy noncontrast, arterial, and delayed venous phases.

**Purpose:**
- Gastrointestinal (GI) bleeding is common in the United States, requiring hospitalization in 223 per 100,000 people each year (Laine 2012).
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**Methods:**
- We analyzed the literature to find previously described parameters for performing dual-energy CTA for GI bleeding (Wells 2018). The protocols were modified after phantom testing and approval by our departmental medical physicists for clinical use. The DE CTA protocol included only arterial and venous acquisitions with VNC reconstructions and iodine maps. All scans were performed on second or third generation dual source CT scanners (Siemens Healthineers, Erlangen, Germany).
- Single-energy GIB CTA from the previous 6 months were analyzed to determine effective dose and table time. A total of 30 single-energy GIB CTA’s from the previous 6 months were analyzed to determine effective dose and table time. A total of 30 single-energy GIB CTA’s were included in this group.

**Results:**
- For scans utilizing single-energy GIB CTA with three separate acquisitions, the mean effective dose was 38.8 mSv and the mean table time was 4 minutes, 55 seconds.
- Upon implementation of the dual-energy GIB CTA protocol with two acquisitions, the mean effective dose decreased to 27.4 mSv and the mean table time decreased to 3 minutes, 45 seconds.

**Conclusion:**
- Dual-energy CT allows significant decreases in patient radiation dose and examination time in the evaluation of GI bleeding.
- After implementation of the dual-energy GIB CTA protocol into the clinical workflow at our institution, we were able to improve the quality of diagnostic images by maintaining the diagnostic capabilities of a three-phase GIB CTA protocol using a dual-energy GIB CTA protocol.