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**DIAGNOSTIC YIELD OF 24-HOUR HOLTER VS 7-DAY AND 14-DAY EPATCH EXTENDED WEAR HOLTER**

**Author Block:** Purvee Parikh, CJ Grigoriadis, Alexandria Dunn, Vincent Norlock, Manish K. Wadhwa, Philips BioTel Heart, San Diego, CA, USA

**Abstract:**

**Background:** While 24-hr Holter monitors have traditionally been prescribed for diagnosing arrhythmias, use of Extended Wear Holters (EWHs) for up to 14 days has become commonplace. **Purpose:** To identify the diagnostic yield (DY) and distribution of clinically significant arrhythmias (CSA) for EWH wear times of 24-hr, 7-days, and 14-days.

**Methods:** From Oct-Dec '21, retrospective data was reviewed for the DY of CSA for Philips ePatch with 1, 7, and 14 days of analyzable data. CSA were identified as Bradycardia, Pause, AV Block, AF, SVT, and VT. DY was calculated as the percentage of patients with a CSA during monitoring.

**Results:** The DY for any CSA with ePatch on Day 1 (n=21,505), Day 7 (n=9,252), and Day 14 (n=11,269) was 25%, 50%, and 65%, respectively. Statistical significance was observed for Days 1 vs 7, 1 vs 14, and 7 vs 14 for the occurrence of any CSA (p<0.00001), and for all individual CSA (p<0.02). Overall, bradyarrhythmias (bradycardia, pause, and AV block) were identified less frequently than tachyarrhythmias (AF, SVT, and VT). Compared to Day 1, the DY at Day 7 was 1.5-1.8x for bradyarrhythmias and 2-4x for tachyarrhythmias. Compared to Day 7, the DY at Day 14 was 1.1-1.3x for bradyarrhythmias and 1.5-1.6x for tachyarrhythmias.

**Conclusion:** Compared to 24-hr Holter, longer duration Philips ePatch EWH monitoring resulted in a 2x DY for any CSA at Day 7 and a >2.5x DY at Day 14 (all p<0.01). A greater increase in DY was seen for tachyarrhythmias than bradyarrhythmias when extending monitoring from 7 to 14 days.

