**Introduction**: Conventional evaluations for recurrence of atrial fibrillation (AF) after catheter ablation are low accuracy. Long ECG monitoring tool, such as auto-triggered external loop recorder (ELR), which can detect asymptomatic AF recurrence, is useful. However, it is not realistic to perform ELR for all AF patients. We aimed to clarify the patients with highest necessity of ELR.

**Methods**: We assessed consecutive 379 patients who received one-week ELR 6 months after the catheter ablation. We compared the incidence and pattern of AF recurrence between 2 types of AF {paroxysmal AF (PAF) group: n=225, vs. persistent AF (PeAF) group: n=154}.

**Result**: The AF detection rate was 8.4% (n=32) in all patients. There was no difference between the PAF and PeAF group {8.9% (n=20) vs. 7.8% (n=12), p=N.S}. However, the incidence of symptomatic or short duration AF (≤5 minutes) was significantly higher in the PAF group than in the PeAF group {5.8% (n=13) vs. 1.3% (n=2), P<0.05}. In contrast, the incidence of asymptomatic or long duration (≥24 hours) was significantly higher in the PeAF group than in the PAF group {6.5% (n=10) vs. 3.1% (n=7), P<0.05}.

**Conclusion**: Auto-triggered ELR for detecting AF recurrence after catheter ablation should be performed especially in patients with PeAF.