IMPRES (IMP) was a 24-wk, randomised, double-blind study comparing imatinib vs. PBO in 202 symptomatic pts with severe PAH despite ≥2 PAH-therapies with PVR ≥800 dyn·s·cm⁻¹. A 3-yr open-label extension is ongoing. In the extension, IMP imatinib pts continued on maintenance dose (200 or 400mg once daily [QD]) while IMP PBO pts received imatinib 200mg QD, increasing to 400mg QD, if tolerated. Data lock for the present analysis was 11 Nov 2011. 144/150 pts entered the extension (66 IMP imatinib, 78 IMP PBO). Median overall exposure in the extension was 276 days. At extension entry, mean±SD 6MWD had increased from IMP baseline by 43±55 vs. 5±63m for IMP imatinib vs. IMP PBO pts. In IMP imatinib pts, improvements in 6MWD were maintained after 48 wks of imatinib (24 wks in IMP + 24 wks in extension: 45±46m increase from IMP baseline [n=54]). In IMP PBO pts, 6MWD increased 16±46m from IMP baseline after 48 wks imatinib in extension (n=20). There were 6 deaths in the extension, all in IMP PBO pts. AEs in the extension included nausea (36.8%), peripheral oedema (27.8%), periorbital oedema (22.2%), vomiting (22.2%), and nasopharyngitis (20.8%). SAEs in ≥3% of patients included RV failure (7.0%), dyspnoea (4.2%), worsening PAH (4.2%), syncope (4.2%), subdural haematoma (SDH, 4.2%) and device-related infection (3.5%). Unexpectedly, SDH occurred in 8 pts (2 in IMP, 6 in ext), all in patients on imatinib and
anticoagulation. 5 pts with SDH recovered, 1 died of SDH and 2 died of unrelated causes. Efficacy and safety assessments continue every 6 months to provide additional data regarding benefits and risks of imatinib in advanced PAH. Imatinib is currently not approved for treatment of PAH.