RIOCIGUAT FOR THE TREATMENT OF CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION (CTEPH): 1-YEAR RESULTS FROM THE CHEST-2 LONG-TERM EXTENSION (LTE) STUDY

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Objective: In the 16-week Phase III CHEST-1 study, riociguat, a novel soluble guanylate cyclase stimulator, significantly improved 6-minute walking distance (6MWD) and a range of secondary endpoints in CTEPH patients (pts). These improvements were maintained for a further 12 weeks in the CHEST-2 LTE study. Here, we present 1-year data from CHEST-2.

Methods: Pts with inoperable or persistent/recurrent CTEPH after pulmonary endarterectomy could enter CHEST-2 after completing CHEST-1 without ongoing riociguat-related serious adverse events (AEs). All pts received riociguat individually adjusted up to 2.5 mg three times daily. The primary endpoints were safety and tolerability; secondary endpoints included change in 6MWD and Word Health Organization functional class (WHO FC).

Results: Of 261 patients enrolled in CHEST-1, 237 (91%) entered CHEST-2. In this interim analysis (cut-off March 2013), 211 (89%) pts were ongoing and 179 (76%) had received ≥1 year of treatment. Riociguat was well tolerated; 3% of pts withdrew due to AEs. At the end of CHEST-1, mean (±standard deviation) 6MWD had increased by +50 m (±59) in riociguat pts and +8 m (±63) in placebo pts. After 1 year of CHEST-2 (n=172), 6MWD had increased by +51 m (±62) versus CHEST-1 baseline. At the end of CHEST-1, WHO FC was improved/stabilized/worsened in 35/62/3% of riociguat pts and 16/81/2% of placebo pts; after 1 year of CHEST-2 (n=178), the proportions were 46/49/3% (data missing for two pts) versus

CHEST-1 baseline. At 1 year, 12 pts (8%) were receiving additional medication for pulmonary arterial hypertension.

Conclusions: Riociguat has a good long-term safety profile and is the first therapy to show sustained benefits in 6MWD and WHO FC in CTEPH pts. Therefore, riociguat is a promising option for the long-term treatment of pts with inoperable or persistent/recurrent CTEPH.