**Background**

- Oncogenic RET alterations are targetable biomarkers in thyroid cancer.
- Multi-kinase inhibitors (MKIs) are therapeutic options in metastatic thyroid cancer (MTC),cabozantinib and sunitinib and differentiated thyroid cancer (carboplatin, lorboplan, and sorafenib); however, MKI-related adverse events leading to dose reductions and drug discontinuation are frequent.
- Pralsetinib is a potent, selective RET kinase inhibitor that has shown clinical activity in patients with RET-altered thyroid cancer in the phase 1/2 ARROW trial (NCT02027784; data cut-off 12 April 2019; intention-to-treat (ITT) population).

**Methods**

- Adult patients with RET-altered locally advanced/metastatic thyroid cancer who had received treatment with cabozantinib 40 mg QD prior to the enrolment cut-off (18 Feb 2021) were included in the ITT population.

**Results**

- The ITT population included 145 patients with RET-altered thyroid cancer who had received prior systemic therapy, including cabozantinib, sunitinib, and sorafenib.

**Overall efficacy**

- In the ITT population, ORR was 52.9% (CI: 39.7–66.4) in patients with RET-altered MTC who had received prior C/V.
- In the ITT population, 71.8% (CI: 53.3–82.2) of treatment-naïve patients with RET-altered MTC and/or sorafenib at data cut-off were included in the ITT population.

**Survival endpoints**

- In patients with RET-altered MTC, median PFS was 25.8 months (prior C/V) and not reached (treatment-naïve).
- In patients with RET-altered MTC who had received prior C/V, median PFS was 25.8 months.

**Safety**

- The RET-altered thyroid cancer safety population included 175 patients (Table 4).

**Conclusions**

- Pralsetinib is a potent, selective RET kinase inhibitor with a manageable safety profile in patients with RET-altered thyroid cancer.