The ERBB pathway is of particular significance for patients with various UC subtypes, which frequently exhibit activating mutations including ERBB2/ERBB3/ERBB4 amplifications, ERBB2/ERBB3 mutations or ERBB2 amplification. Therapy targeting this pathway are considered to be attractive therapeutic strategies in UC.

Materials
An orally available ERBB family blocker that irreversibly inhibits signalling via ERBB1 (epidermal growth factor receptor, EGFR), ERBB2, ERBB3 and ERBB4 blocks and hence tumorigenic properties of cancer cells. Approval was based on a Phase I trial for patients with NSCLC harboring EGFR exon 19 deletions or 21 (L858R) substitution mutations and median PFS 6 (Cohort A).

Figure 1. Molecules of action

Endpoints and other assessments

Key inclusion criteria
- Age ≥18 years
- Locally advanced (LAD) or metastatic UC
- ECOG PS 0 or 1
- Treatment within 4 weeks prior to start of study is prohibited
- No prior anti-EGFR therapy
- No concomitant use of CYP3A substrates, inhibitors or inducers
- No major surgery
- No interstitial lung abnormalities
- No pregnant or breast feeding women
- No active intercurrent infection
- No prior therapy with an investigational drug or procedure

Key findings and conclusions
- Phase II trial of afatinib in patients with advanced/metastatic urothelial carcinoma with genetic alterations in ERBB receptors 1–3 who failed on platinum-based chemotherapy
- The trial is currently ongoing in Spain, France, and Italy. Successful recruitment of patients has been noted, with 24 patients having received study drug.
- The study is designed to assess the efficacy and safety of afatinib monotherapy in patients with urothelial carcinoma (UC) and includes secondary endpoints such as PFS, OS, ORR, and DCR.
- As of January 8, 2018, 24 patients have received study drug: Afatinib (n = 25) and Pembrolizumab (n = 45).
- Checkpoint inhibitors (anti-PD-1 and anti-PD-L1) such as atezolizumab, pembrolizumab, nivolumab, avelumab, and durvalumab have demonstrated promising results in the treatment of UC.
- This study was funded by Boehringer Ingelheim. The authors were fully responsible for all content and editorial decisions, involved at all stages of poster development, and have approved the final version.

References
10. Efficacy and Safety of Afatinib in UC Patients with Genetic Alterations in ERBB Receptors 1–3: A Phase II Trial. ESMO 2017; poster #920 TiP.

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