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What Comes Next after SGLT2 Inhibitors– Emerging CKD Treatments in Clinical Development at Boehringer Ingelheim

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The global burden of CKD is substantial and is commonly underestimated, which results in estimates being much higher than commonly reported. For most individuals that develop impaired kidney function, there are no apparent early symptoms and consequently people are not aware of their condition until late stages of the disease. However, CKD is increasingly recognized as a global public health problem, affecting 10-15% of the population worldwide. According to the Global Burden of Disease study data from 2019, individuals with impaired kidney function have an exceedingly high age-standardized mortality rate of 18.5 deaths per 100,000 people, which is a 64.1% increase when compared to rates observed in 1990. In 2019, 1.4 million deaths were attributed to CKD globally and researchers predict that by 2040, CKD will account for more deaths than lung or breast cancer, HIV/AIDs, or preterm birth.

CKD results from a variety of causes, most frequently from diabetes and followed by arterial hypertension and glomerular diseases. Individuals with CKD have increased risk of cardiovascular disease, including heart failure. While the relative risk for all-cause and CV mortality is 20-90% higher between individuals with T2D compared to those without T2D across the range of eGFR and UACR levels, these associations between all-cause and CV mortality with eGFR and albuminuria are independent of diabetes status.

CKD is also associated with impaired quality of life at all ages. Lower quality of life is associated with more advanced CKD (i.e., lower eGFR) with patients on dialysis exhibiting the lowest quality of life. Despite progress in the recent years, the unmet medical need for pharmacological treatment to reduce the risk for disease progression in patients with CKD and reduce their risk for CV complications remains high. Apart from general measures such as blood pressure control and lifestyle modifications, RAASi are the mainstay of treatment. More recently, new treatment options have been evaluated in pivotal RCTs and approved for the treatment of CKD, i.e., sodium-glucose-co-transporter-2 inhibitors (SGLT2i) and non-steroidal mineralocorticoid-receptor-antagonists (MRA). Those compounds will without any doubt further improve the prognosis in broad CKD populations, however also in these trials studying both drug classes individually, a substantial risk for disease progression and CV complications remained. Moving forward both compounds for the broad population, but also more tailored approaches to treat specific diseases will be needed.

Boehringer Ingelheim has a rich pipeline dedicated to the development of compounds to address this remaining unmet need of patients suffering from CKD, covering both broad CKD and the rare disease space. The talk give an overview over the company's ongoing activities in the mid- to late-stage clinical development phase.