TARGET: HER2

ANTIBODY: Anti-HER2 monoclonal IgG1, humanized

LINKER: Site-specific conjugation of β-glucuronide for tumour-selective enzymatic payload activation and release

DRUG/PAYLOAD: Auristatin MMAF

DRUG DESCRIPTION: IKS014 is a class-leading ADC that incorporates an anti-HER2 antibody conjugated to the tubulin polymerization inhibitor MMAF via site-specific conjugation, with tumour-selective payload activation and release.

CLINICAL STUDIES: Class leading clinical profile.

Phase 1: 67 evaluable patients with advanced HER2+ BC who failed on previous HER2 therapies. >90% had received >2 lines of previous therapy; >80% had ≥3 metastatic lesions.

RP2D: 2.3mg/kg once every 3 weeks

At a median follow-up of 5.1 months:

Efficacy
- ORR = 54% (equivalent to Enhertu)
- mPFS = 15.5 months
- DCR = 88%

Safety
- No ILD at any grade
- No ocular (corneal) DLTs
- Low incidence (4.5%) of neutropenias
- No thrombocytopenia
- Grade ≥3 TRAEs (39% of patients): hypokalemia (18%); platelet count decrease (7%)

PRECLINICAL STUDIES: Best-in-class efficacy (MED in mouse xenograft and PDX models); Best-in-class safety (HNSTD NHPs); Preclinical TI is significantly superior to in-clinic and on-market HER2-directed ADCs.

Efficacy: Significantly enhanced efficacy over Kadcyla; similar or better efficacy than Enhertu. In JIMT-1 (HER2 2+ BC), IKS014 induced complete regression with 5mg/kg single dose; Enhertu shows marginal regression at 10mg/kg. IKS014 is active in Kadcyla-resistant HER2+ gastric cancer models. Safety: GLP toxicology; HNSTD >12mg/kg (single dose) with no ocular or ILD-related toxicities. Preclinical TI is >4-fold higher than Enhertu and >10-fold higher than Kadcyla.

DEVELOPMENT STATUS: Phase 1 (outside of China); Phase 1b/2 (China, as FS-1502 where it is commercialized by FOSUN Pharma); Phase 3 (not yet recruiting)

CLINICAL INDICATION: HER2+ advanced solid tumours:
- Breast cancer (BC)
- Gastric (GC) & gastroesophageal-junction (GEJ) cancers
- Other solid tumours (lung, urothelial, colorectal)

CLINICAL TRIALS

IKS014 in advanced solid tumors that express HER2
NCT05872295
https://classic.clinicaltrials.gov/ct2/show/NCT05872295
The study consists of 2 parts: dose-escalation (Part 1) and dose-expansion (Part 2).
- Estimated enrolment: 165 patients
- Enrolment sites: Australia, US

Phase 1 Study of FS-1502 in patients with HER2 expressed advanced solid tumors and breast cancer.
NCT03944499
https://classic.clinicaltrials.gov/ct2/show/NCT03944499
- Estimated enrolment: 297 patients
- Enrolment sites: China

FS-1502 Versus T-DM1 for HER2-Positive Unresectable Locally Advanced or Metastatic Breast Cancer
NCT05755048
https://classic.clinicaltrials.gov/ct2/show/NCT05755048
- Estimated enrolment: 314 patients

PARTNERING STATUS

Available for license: WW excluding China.

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