■ Sat-401 ■

Prognostic impact of FGFR2 amplification in gastric cancer: a meta-analysis and systemic review

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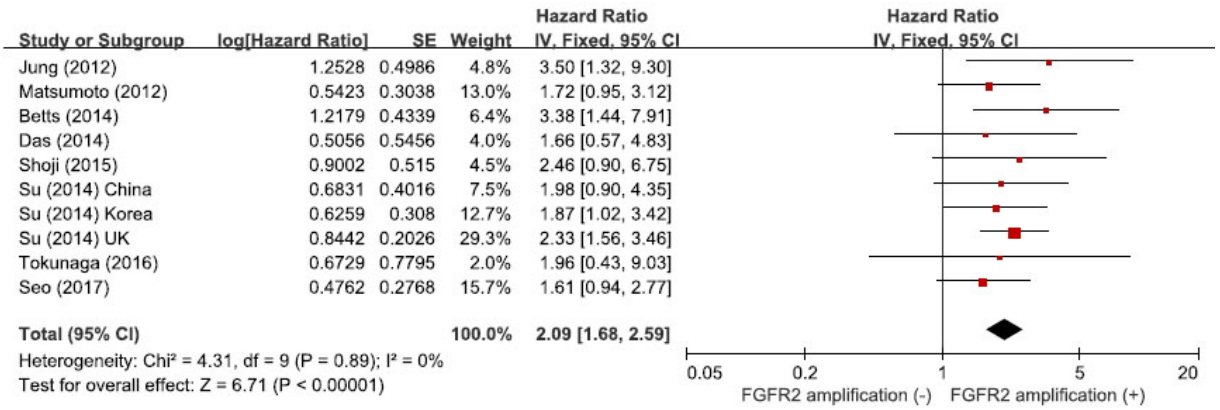
Background/Aims: Fibroblast growth factor receptor-2 (FGFR2) amplification has been reported in up to 15% of patients with gastric cancer (GC). However, the prognostic impact of FGFR2 amplification has not been consistent among studies. **Methods:** We conducted this meta-analysis to evaluate the prognostic significance of FGFR2 amplification in patients with GC. A systematic computerized search of the electronic databases including PubMed, PMC, EMBASE, Google scholar, and Cochrane Library (up to June 2018) was performed **Results:** From eight studies, 2,377 patients were included in the pooled analysis of hazard ratios (HRs) with 95% confidence intervals (CIs) for overall survival. There was no significant heterogeneity among studies (X2=4.32, P=.89, I2=0%). Compared with patients with FGFR2-unamplified GC, patients with tumors harboring FGFR2 amplification showed significantly worse survival (HR=2.09, 95% CI: 1.68-2.59, P<.00001) **Conclusions:** In conclusion, this meta-analysis indicates that FGFR2 amplification is an adverse prognostic factor in patients with GC. However, the potential usefulness of FGFR2 amplification as a predictive biomarker for response to FGFR2 inhibitors remains to be investigated.



■ Sat-402 ■

A pilot study of exercise intervention in patients with metastatic cancer

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Background/Aims: Skeletal muscle loss is a central component of cancer cachexia syndrome and is a poor prognostic factor in cancer patients. We investigated prevalence of sarcopenia and the feasibility of exercise intervention in patients with advanced solid cancers receiving first-line palliative chemotherapy. **Methods:** Between July 2017 and February 2018, consecutive patients with newly diagnosed with advanced solid cancer were enrolled to our prospective cohort of sarcopenia. Skeletal muscle mass was measured using both the cross-sectional area of muscle at the level of the third lumbar vertebra(L3) on baseline computed tomography and bioelectrical impedance analysis(BIA). Sarcopenia was defined as a L3 muscle index of less than 55cm2/m2 for men and of less than 39cm2/m2 for women. Patients were recruited to participate in a 12-week, combined resistance and aerobic exercise program consisting of supervised, hospital-based training and home-based training, during the first-line palliative chemotherapy. The primary endpoint was feasibility and safety of the exercise intervention. Skeletal muscle mass by BIA and patients' quality of life questionnaires were measured at baseline and after the intervention. **Results:** Among 76 patients enrolled, sarcopenia was present in 58 patients. 19 patients was enrolled in the exercise program, however 5 patients withdrew consent before commencement(health concern(n=2), distance to the hospital(n=1), unspecified(n=2)). The completion rate of the 12-week exercise program was 78.6%. Disease progression(n=2) was the main reason for early discontinuation. The adherence rate of the supervised exercise session was 78.1% (207/265) and there was no adverse event associated with the exercise. Among participants in the program, there was no significant change in skeletal muscle index (mean, 9.4±1.3 kg/m2 vs. 9.4±1.2 kg/m2, *p*=0.982). FACIT-fatigue scale non-significantly improved after the exercise intervention (mean, 35.2±10.4 vs. 38.2±9.8, *p*=0.635). **Conclusions:** Exercise interventions appear to be feasible and safe in patients with advanced solid cancer and might have a role of preventing skeletal muscle loss without fatigue exacerbation during palliative chemotherapy.

Table 1. Baseline characteristic of the study population

Variable	Cohort (n = 76) No. (%)	Exercise group (n=19) No. (%)
Age, years		
median (range)	64 (30-84)	60 (30-74)
Male	52 (68.4)	10 (52.6)
BMI, kg/m²		
Underweight (< 18.5)	4 (5.3)	0 (0)
Normal (≥ 18.5, < 23.0)	37 (48.7)	8 (42.1)
Overweight (≥ 23.0, < 25.0)	21 (27.6)	7 (36.8)
Obese (≥ 25.0)	14 (18.4)	4 (21.0)
Stage (TNM)		
III	2 (2.6)	0 (0)
IV	74 (97.4)	19 (100)
ECOG PS		
0	15 (19.7)	7 (36.8)
1	58 (76.3)	12 (63.2)
2	3 (4.0)	0 (0)
Cancer type		
Lung cancer	32 (42.1)	9 (47.3)
Gastrointestinal cancer	28 (36.8)	1 (5.2)
Gynecologic cancer	7 (9.2)	5 (26.3)
Genitourinary cancer	1 (1.3)	0 (0)
Others	8 (10.5)	4 (21.1)
Sarcopenia	58 (76.3)	15 (78.9)

BMI, body mass index; ECOG PS, Eastern Cooperative Group Performance Status;

Table 2. Change of skeletal muscle mass and quality of life in exercise participants

Measure	Before exercise	After exercise	*p* value
Skeletal muscle mass index (kg/m²)	9.42 (±1.26)	9.42 (±1.18)	0.982
FACIT fatigue scale	35.2 (±10.36)	38.3 (±9.79)	0.635

FACIT, Functional Assessment of Chronic Illness Therapy

*Results presented as mean±SD