predict 3-year prognosis. UBE2T showed an AUC of 0.977 to predict 3-year prognosis. UBE2T mono-ubiquiting FANCD2 is a critical process in ICL repair. Comet assay showed UBE2T knockdown-induced DNA damage, which is enhanced after MMC treatment. FANCD2 ubiquitin decreased after UBE2T knockdown. p-Chk1 and p-ATM increased when exposed to MMC. UBE2T expression level is related to immune receptors such as TNFRSF14, etc.

Conclusion/Implications A DDR genes nomogram with UBE2T as a key variable was identified. This study may help risk stratification and promote DDR agent and ICB use in endometrial cancer.

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**NATURAL COMPOUND BAICALEIN SYNERGIZES WITH AMP-ACTIVATED PROTEIN KINASE ACTIVATOR SR04 IN ENDOMETRIAL CANCER BY INHIBITION OF PI3K/mTOR AND STAT3 WITHOUT ACTIVATING AKT OR MAPK**

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**Introduction** Loss of PTEN expression is common in endometrial cancer. The PI3K/mTOR pathway has been a target, but counter-regulatory pathways via Akt and ERK may hinder efficacy. We previously showed that the natural flavonoid baicalein inhibits cell growth via mTOR pathway. We investigated the effects of a novel AMPK activator SR04 in combination with baicalein in endometrial cancer.

**Methods** Endometrial cancer cell lines, RL95–2 and KLE were treated with varying concentrations of baicalein and SR04. Cell viability assessment at 72 hours was determined by MTT assay. Drug combination studies and synergy quantification was performed using Chou-Talalay method. Western blot analysis was utilized to evaluate PI3K/mTOR end targets.

**Results** Baicalein or SR04 alone inhibited proliferation of endometrial cancer cell lines in a dose dependent manner. In combination, baicalein and SR04 acted synergistically to inhibit cell proliferation, especially at low concentrations (figure 1). The synergistic effect was mediated by inhibition of STAT3 and PS6 as demonstrated on Western blot (figure 2). Interestingly compensatory activation of AKT and MAPK pathways,
which can oppose the anti-proliferative effects of PI3K/mTOR inhibition, was not observed with the combination of baikalein and SR04 on Western blots.  

Conclusion/Implications The combination of baikalein and AMPK activator SR04 inhibits endometrial cancer cell proliferation in a synergistic manner. The combination does not appear to activate AKT and MAPK pathways which can hinder efficacy. The combination of baikalein and SR04 may offer a novel treatment paradigm for endometrial cancer.

Introduction Endometrial cancer (EC) is the most common gynecological cancer in Japan. The initial treatment of EC is surgery followed by platinum-based chemotherapy, therefore, platinum resistance is major factor of poor prognosis. In this study, we focused on IGF2BP2 which is highly expressed in platinum resistant EC cells and analyze its function.

Methods We performed iTRAQ-based exhaustive and quantitative protein analysis using EC tissues of platinum sensitive and resistant cases, and detected high expression protein (IGF2BP2) among platinum resistant cases. Using 119 EC cases, we also performed survival analysis to reveal the correlation between IGF2BP2 expression levels and overall survival. Moreover, we generated IGF2BP2 knockdown EC cell lines using siRNA, and measured IC50 value of platinum reagent.

Results iTRAQ-based protein analysis detected 2299 proteins, and IGF2BP2 was one of the highly expressed proteins in platinum resistant EC cases. High expression of IGF2BP2 was associated with poor prognosis of EC (p<0.05). Knockdown of IGF2BP2 decreased IC50 value of platinum reagent (p<0.05).  

Conclusion/Implications High expression of IGF2BP2 is poor prognostic factor and is related platinum resistance of EC.

Introduction Obesity is a major risk factor in the development of endometrial cancer in young patients in the reproductive age group. Fertility sparing treatment is a viable option for a select group of patients with early endometrial cancer, and involves systemic and intra-uterine hormonal therapy. Weight loss has been associated with improved outcomes in this group. Bariatric surgery has been shown to be the most effective and durable method of weight loss in obese patients. However, there is a paucity of data studying the benefit of bariatric surgery as part of fertility sparing management.

Methods We present a retrospective case series of five patients who are undergoing fertility sparing treatment for early endometrial cancer, who also underwent bariatric surgery for treatment of obesity and related comorbidities. We aim to show early regression of endometrial cancer for all the patients and also report on the other health benefits of bariatric surgery.

Results All five patients in this series achieved regression of endometrial cancer within six months of undergoing bariatric surgery. They also achieved significant weight loss and three patients with obesity-related comorbidities had remission of these conditions. One patient conceived via in-vitro fertilization and delivered a healthy baby.

Conclusion/Implications Patients on fertility sparing treatment for endometrial cancer who underwent bariatric surgery achieved early cancer regression within six months, significant weight loss and resolution of obesity related comorbidities. Bariatric surgery could be a promising component of fertility sparing management for obese patients. Long term, prospective studies are required to confirm the benefits reported in this series.