Methods Female C57BL/6 mice were divided into 5 groups: Normal, Tumor, Model, RG-L or RG-H group. Cell-derived xenograft model was established for mice in all groups in advance except Normal group. On D1–7, mice were administered by gavage once in the morning: Normal group, Tumor group and Model group were given distilled water, RG-L group and RG-H group were given RG solution at the doses of 100 mg·kg⁻¹ or 200 mg·kg⁻¹ respectively. On D5–7, mice were also administered by gavage once every afternoon: Normal and Tumor group was given distilled water, Model group, RG-L Group and RG-H group were given Niraparib solution 80 mg·kg⁻¹. Samples were collected on D8.

Results With the increase of concentration, the effect of RG on protecting the hematopoietic function of bone marrow might improve (figures 1 and 2). The mechanisms of RG ameliorating myelosuppression were that it protected the differentiation ability, promoted the repair of DNA double-stand breaks and improved the cell cycle transition of bone marrow nucleated cells (figure 3). There was no evidence suggesting that RG worsened the efficacy of Niraparib (figure 4).

Conclusions 1. RG may have the advantage of relieving myelosuppression induced by Niraparib. High concentration of RG may be more effective. 2. RG may be a safe agent which does not negatively affect the efficacy of Niraparib.

E-poster viewing: Breast cancer

E0020/#947 THE INCREASE IN INCIDENCE OF BREAST CANCERS IN ASIANS IN THE UNITED STATES AND THE REPUBLIC OF CHINA: WHO IS MOST AT RISK?

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Objectives The aim of this study was to identify trends associated with incidence of breast cancers in Whites, US Asians and Native Chinese.

Methods Data was obtained from the United States Cancer Statistics, the Behavioral Risk Factor Surveillance (BRFSS), and the Taiwan Cancer Registry between 2001 and 2018. Native
Trends in the Incidence of Invasive Breast Cancers in the Republic of China

EP021/#1089

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Objectives The aim of this study was to identify trends associated with incidence of breast cancers in Native Chinese from the Republic of China.

Methods Data was obtained from the Taiwan Cancer Registry between 2001 and 2018. SEER®Stat 8.3.9 and Joinpoint regression programs 4.9.0.0 were used to calculate the incidences and trends. The incidence was adjusted by WHO 2000 standard population.

Results From 2001 to 2018, the incidence of breast cancer has increased dramatically from 40.23 to 76.66 (per 100,000). The highest incidence was in the 60–64 year age group (232.23) and those residing in Taipei City (92.34). The incidence of infiltrating ductal carcinoma was higher at 65.2, while lobular carcinoma was 3.46. The overall incidence of breast cancer has increased over the last 18 years at an average annual percentage change (AAPC) of 3.96% (p<0.001). Of the breast cell carcinoma subtypes, mixed infiltrating ductal and lobular carcinoma had the highest increase of 5.82% (p<0.001), followed by lobular carcinoma (5.54%, p<0.001) and infiltrating duct (4.08%, p<0.001). In an intersectional analysis, the highest AAPC was seen in younger women (45–49 years) residing in Tainan City with lobular carcinoma at 10.9% (p<0.001).

Conclusions The incidence of invasive breast carcinoma is increasing in Taiwan, especially in younger women (<50 years) in Taipei City. Early screening programs are particularly warranted in these high risk groups. Further studies are warranted to determine potential genetic and social determinants associated with this rise in incidence.