**Methods**

*Patient Selection and Evaluation*

This retrospective study was approved by the Institutional Review Board (IRB) of Samsung Medical Center (IRB number: 2020-03-010). Medical records, photographs, and laboratory data of patients who were referred to the Dermatology Department after treatment with cetuximab from January 2013 to June 2018 at Samsung Medical Center, Seoul, South Korea, were reviewed. Medical records of patients who were referred to dermatologists were reviewed to determine whether acneiform eruption was associated with cetuximab use. Cetuximab-induced acneiform eruption was defined as papulopustules, folliculitis confined to the seborrheic areas including the face, scalp, chest, and upper back after cetuximab infusion. Patients were excluded if they had a history of presence of acne one month prior to cetuximab infusion or had taken any medications associated with acneiform eruption before cetuximab treatment. The dermatologist assessed severity of acneiform eruption every two or four weeks and prescribed minocycline (50 mg, twice a day) or doxycycline (100 mg, twice a day) when the severity was CTCAE grade 2 or higher. We advised patients to apply moisturizers on the whole face and body and to add topical antibiotics when pustules and papules burst. The prescriptions were terminated when the acneiform eruption resolved or could be controlled by topical antibiotics with moisturizer. Therefore, the duration of antibiotic administration indirectly reflects the period of acneiform eruption and the total number of tablets divided by the days of antibiotic administration reflects the adherence to treatment. So we investigated the duration and amount of antibiotic medication to assess the duration and compliance of treatment and course of acneiform eruption. In addition, cancer type, age, sex, radiotherapy, other anti-cancer drugs, and onset time of acneiform eruption from commencement of cetuximab that might affect acneiform eruption were also investigated.

*Statistical Analysis*

All statistical analyses were performed using SAS version 9.4 (SAS Institute, Cary, NC, USA) and R 3.5.3 (Vienna, Austria; http://www.R-project.org/). All analyses were conducted using two-tailed tests with the significance level set at 5%. The relationships between duration and amount of minocycline or doxycycline medication and demographic data were investigated using logistic regression analysis. We used the Hosmer-Lemeshow test for assessing goodness of fit in the logistic regression model. The relationships between interval from cetuximab use to antibiotic administration and dosage and duration of antibiotic administration were investigated using nonparametric rank regression analysis.