Purpose. The objective of this study was to assess gonial angle under the angle classification by comparing panoramic radiograph and lateral cephalometric radiograph. Materials and Methods. 49 patients (25 males, 24 females) with an age range of 12-29 years participated in the present study. Subjects were retrospectively selected among those categorised as skeletal and dental Class I, II, and III malocclusion group. Using lateral cephalometric radiograph, mandibular and ramal planes were drawn and based on these planes. Gonial angle was determined from two tangents which were drawn from the inferior border of the mandible and posterior borders of the condyle and ramus of both sides in the panoramic radiographs. Multiple comparison tests (ANOVA) were used to determine differences between the three angle groups. Results. There were no significant differences between Class I, II, and III malocclusion group values of gonial angles determined by lateral cephalometric radiograph and panoramic radiographs. Conclusion. Panoramic radiograph results were shown to be as reliable as lateral cephalometric radiograph in all angle classifications. Panoramic radiography can be used as an alternative radiographic technique to detect gonial angle in orthodontic patients.