Objective: The purpose of this study was to evaluate the prevalence of detectable endodontically related lesions as determined from the reports of panoramic radiographs in a Turkish subpopulation. Materials and Methods: There were 19,625 reports of panoramic radiographs that were evaluated. Four investigators assessed the radiographs and reports that had been written. For each tooth of the subjects, the following items were surveyed: presence of periapical lesion, inadequate root canal treatment, external and internal root resorption. Results: The patients who had panoramic radiography reports were between the ages of 3 and 91 years (mean age 29.43 ± 18.83 years). 10,941 (56%) were female and 8684 (44%) were male patients. Inadequate root canal treatment was recorded in 588 (3%) radiography reports and it was more frequent in mandibular molar teeth. 2287 (11.7%) of the patients had periapical lesions and it was more frequent in maxillary incisor teeth and mandibular molar teeth. External resorption was observed in 61 (0.3%) patient records, while internal root resorption was reported in 14 (0.1%) reports. 81 inadequate root-filled teeth presented a periapical lesion. A positive strong linear correlation was found between the presence of inadequate root canal treatment and a periapical lesion among the patients ($r = 0.098$, $P = 0.000$). Conclusions: The results of this study suggest that external and internal root resorption were not frequent clinical conditions. The high frequency of periapical lesions and inadequate canal treatment in molar teeth indicate the need to improve the technical quality of root fillings, especially in molar teeth.