Aim: Radiological localisation imaging may achieve gland localisation in primary hyperparathyroidism, thereby allowing minimally invasive surgery. However, initial imaging sometimes fails to identify the abnormal gland. This study explored the outcomes of patients undergoing repeated imaging at our institution, after a negative initial set of scans.

Method: Data was retrospectively collected and analysed for patients undergoing repeated imaging between 2015 and 2020 at an institution providing parathyroid endocrinology services.

Results: 45 patients who had repeated localising scans after a first localising scan that was negative, were identified. Of these, 39 did not undergo surgery. 11 out of these 39 patients (28%) had subsequent positive localisation scans, but no particular patient factors were predictive of gland localisation success. A large proportion of patients were managed conservatively, despite repeated sets of negative scans being done. Patients undergoing three or four sets of scans did not have imaging or surgical success.

Conclusion: A dedicated, streamlined parathyroid pathway should be followed whereby patients should be triaged for suitability for surgery prior to repeated imaging. A second set of scans should be offered when patients are unsuitable for conservative management and are willing and fit to undergo surgery. There is no merit to repeating scans more than twice.