Guided Tissue Regeneration in Periodontal Therapy

The application of growth factor mediated tissue engineering to regenerate lost periodontal tissues

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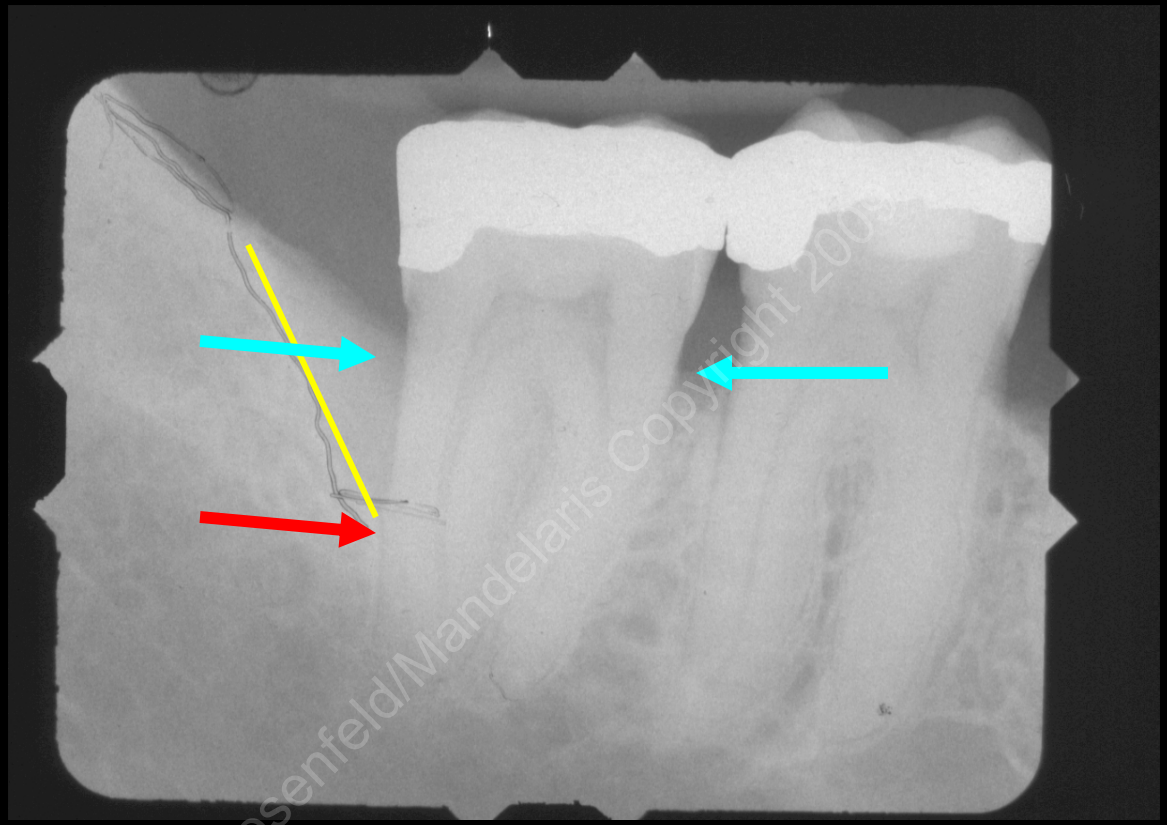
Guided Periodontal Tissue Regeneration (GTR)



- This x-ray demonstrates a patient who has experienced advanced, but localized bone loss around a molar (#31)
- The turquoise arrows denote where bone should be located in a healthy, non diseased level around this tooth.
- The red arrow denotes the bone level extent which has been suffered as a result of localized periodontal disease. Nearly 70% bone loss has occurred on the distal aspect. Its future is uncertain and this tooth could easily be lost in a short period of time if therapy is not pursued.
- The yellow line denotes the pattern of bone loss, which is vertical in this case. Because this is bone loss pattern that is vertical in nature, it has depth & width characteristics which allow periodontal regeneration to be possible (unlike other patterns of bone loss resulting from gum disease).

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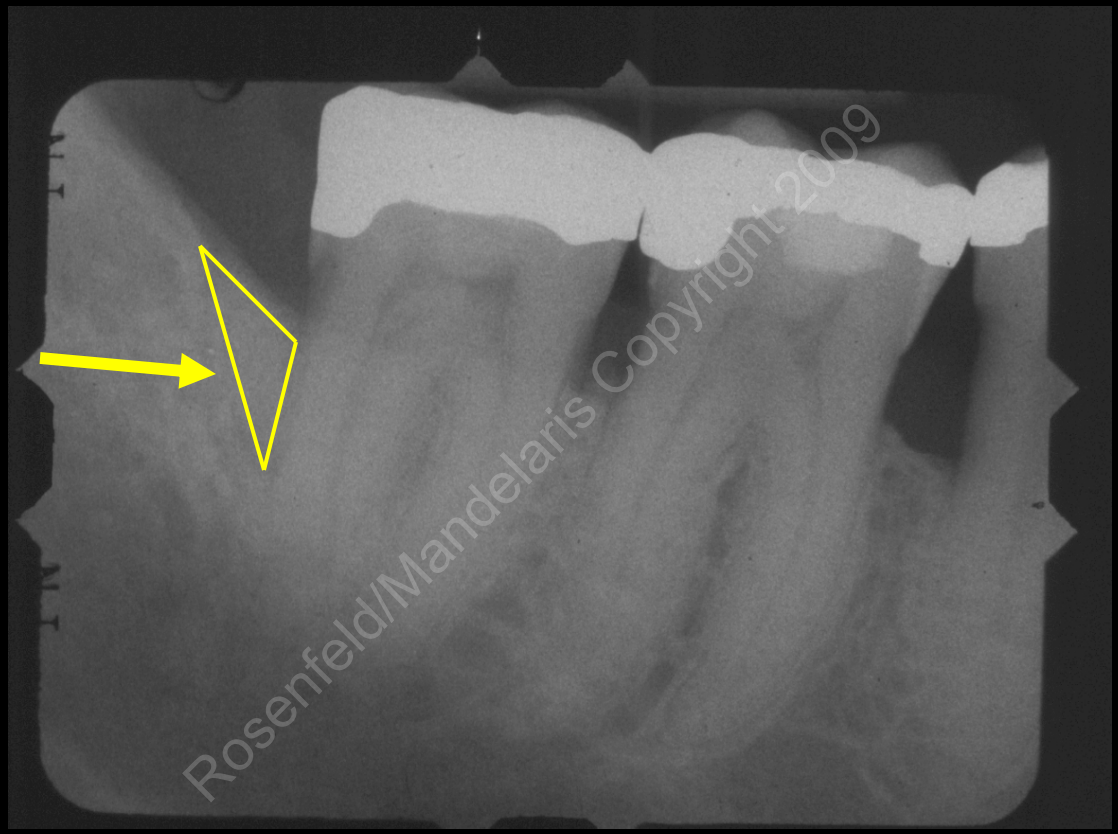

- This radiograph was taken 6 months after guided periodontal tissue regeneration surgery. Regenerative surgery involves applying a bone graft into the defect. The bone graft is usually a human donor graft (allograft) which is hydrated in a powerful synthetic growth factor (PDGF- platelet derived growth factor) which helps stimulate robust wound healing and an accelerated repair process by the body.

- The yellow arrow and triangle demonstrates the volume of bone that has been regenerated successfully back to the tooth. This result has changed the short and long-term tooth prognosis to excellent.

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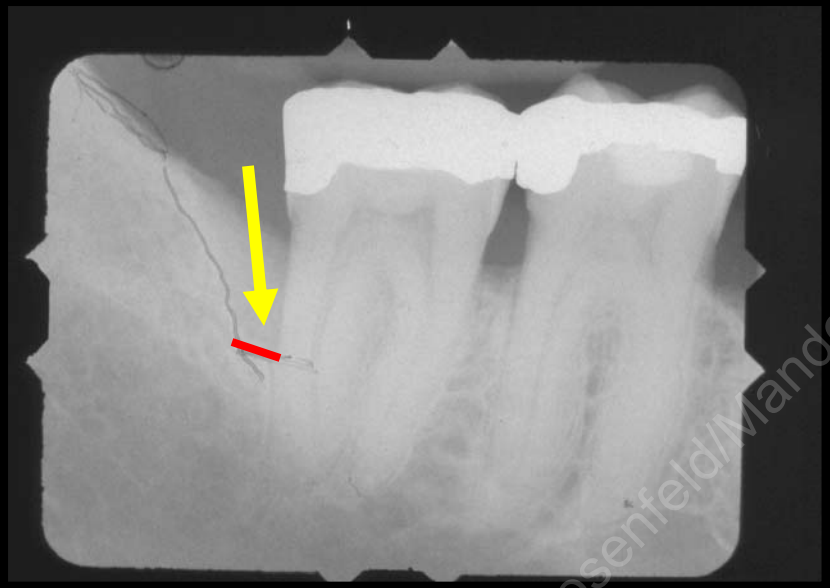
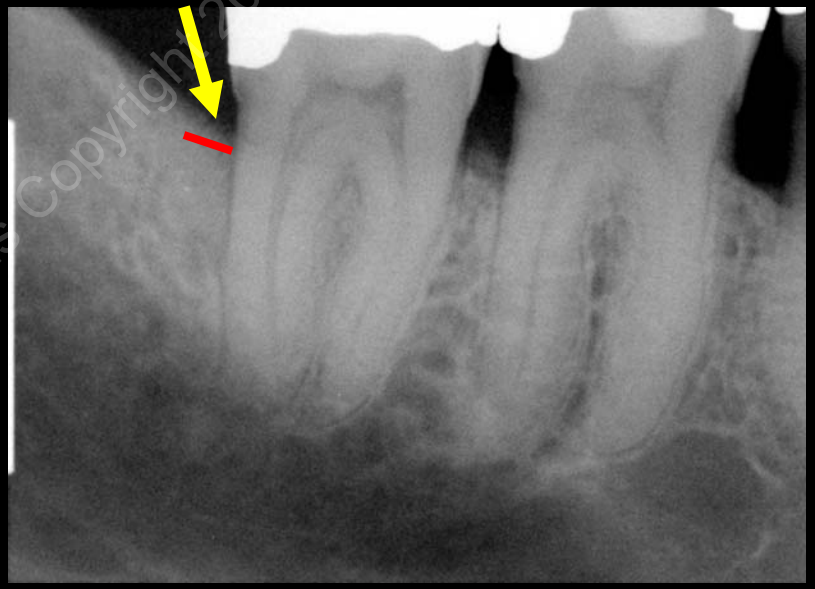
BEFORE



AFTER



The red lines and yellow arrows indicate the before and after bone levels around tooth #31