RETROSPECTIVE COHORT STUDY OF 222 SEQUENTIAL PATIENTS TREATED WITH THE LAPIP™ PROCEDURE FOR FAILING DENTAL IMPLANTS DEMONSTRATES OVER 90% EFFICACY

A consistently effective treatment approach for failing dental implants due to periimplantitis is yet to be developed⁽¹⁾. The author was trained at the Institute for Advanced Dental Technologies to perform the LANAP® procedure for periodontitis and the similar LAPIP™ procedure for failing implants⁽²⁾. These are FDA-cleared, laser-based soft tissue procedures using the PerioLase® MVP-7™ free-running pulsed Nd:YAG Dental Laser (Millennium Dental Technologies, Inc., Cerritos, CA 90703). We initiated this study to examine the clinical outcomes of the first 222 patients with 437 failing implants treated at this private clinic with the LAPIP™ procedure. Treatments were begun at this location immediately following training. Data are inclusive of all treatments and follow-up visits from November 2013 through September 2016.

Data collection procedures and patient anonymity were reviewed by a private IRB and data were managed according to GLP and the STROBE checklist. An independent CRO monitored data collection and performed the statistical analyses. There was only the inclusion criterion of having had the LAPIPTM treatment at this practice. All LAPIPTM patients were identified and no LAPIPTM patients were excluded from the study. Demographic, medical history, treatment, and outcome variables were summarized descriptively. Other outcome measures were summarized descriptively with 95% confidence intervals.

A general estimate of efficacy applied to the entire population is percent implants lost versus percent rescued following treatment. Ten (10) of the 222 patients treated (5%) are currently lost to follow-up and 68 recently treated patients are pending follow-up. The remaining 144 patients had 266 treated implants. In this subgroup 9 implants were recorded as lost and 257 were intact at a median follow up time of 6.4 months. By this measure efficacy is 96.6%. Other measures of efficacy are estimated from the sub-groups of patients with complete before-and-after probe depths and/or clinical signs.

There was a continuum of responses to therapy. More than eighty percent of those treated one time demonstrated a decrease in probing depths and elimination of clinical signs of inflammation (bleeding, suppuration and/or erythema). This is the group called "one-and-done." Another group required a second treatment before resolution of clinical signs. Approximately 4% received a third treatment without complete resolution of clinical signs but have intact implants and are being followed. Our data indicate that the minimally invasive LAPIP™ procedure for failing dental implants may be the treatment that provides the most consistent, effective and predictable clinical outcomes to date.

