

> **SUCCESS FOR THE BEST  
SURVIVAL FOR THE REST** | **JAN  
2014**

Should a tooth be saved or should it be extracted and an implant placed? Is basing a comparison between implant retention and RCT success on endodontic outcome measures reliable? The short answer is no. Strindberg's criteria (1956) and the PAI index (Ørstavik et al., 1996) are widely accepted as measures of RCT success. Generally, RCT success criteria are stricter than those for implant survival. Although more standardised than implant literature, below is a list of some concerns about RCT outcome studies:

- In many studies pre-doctoral students performed the RCT
- Follow-ups were often too short for full healing of a lesion to occur (i.e. 6 months)
- Minimal to no exclusion criteria
- Almost no control of type or timing of the final restoration

Pre-doctoral students lack experience and may not accurately represent the skills of the average practicing dentist. Healing of a lesion of endodontic origin can take well over 5 years. Thus, many healing teeth would not qualify as successful for the purposes of a typical study. Unlike most implant studies, there were few or no exclusion criteria for potential patients. The timing and quality of the final coronal restoration is the single most important factor in the retention of a RCT tooth; this too was rarely controlled.

In the literature, resolution of apical periodontitis and asymptomatic responses are necessary for endodontic success. Most implant studies assess survival not success. Implant survival requires osseointegration regardless of the presence of peri-implantitis or bone loss. Thus, ailing, failing, or non-restorable implants would still qualify as survived. Below is a list of how most traditional implant studies differ from typical endodontic success studies:

- Most implants placed by specialists
- Exclusion of smokers, bruxers/clenchers/other para-functions, regular alcohol consumers, poor hygiene, uncontrolled diabetes, those with class IV bone, etc...
- Failures within the first year were not part of the inclusion criteria
- Non-restorable implants, nerve damage, abandoned surgeries, poor aesthetics, and other complications did not exclude implants from survival status

Promoting implant survival rates of >95% is improper as the results are based on ideal situations. It is unfair to expect private practice dentists working on the public to mimic such high survival rates. A patient may not be impressed if their implant has survived but is non-restorable, unaesthetic, has peri-implantitis, or significant bone loss. Doyle et al., 2006 used success criteria for both implants and RCT teeth and followed the patients for 7 – 9 years; the success rate for implants was 74% and 84% for RCT teeth.

At best, comparing survival and success rates is problematic and it can be an obstacle to maintaining the long-term oral health the public. The decision to save or extract a tooth must be based on the clinical parameters of the individual patient. So here is to your success in 2014 as survival alone is not enough!

Regards,



Dr. Joel N. Fransen  
BSc(OT), DMD, FRCD(C)  
Certified Specialist in Endodontics

“

Advances in endodontic procedures, such as instrumentation, irrigation, illumination, and magnification make it unreliable to rely on outcome studies from more than 10 years ago. To do so, would be analogous to relying on survival rates of blade implants for modern osseointegrating implants.

”



**Richmond Endodontic Centre**  
Dr. Joel N. Fransen

**110-11300 No.5 Rd**  
Richmond, BC V7A 5J7  
office@endodonticcentre.com  
T 604.274.3499  
F 604.274.3477

**Office Hours**

8am to 5pm - Monday to Friday  
Extended hours are also available

The Richmond Endodontic Centre Boardroom is open; it is available for meetings, lectures, and study clubs. Please come by and have a look at our new presentation centre!



**RICHMOND**  
ENDODONTIC CENTRE  
**BOARDROOM**