BioCore Exploring Scientific Community International Journal of Dentistry and Oral Health

ISSN 2471-657X

Open Access

Research Article

Actinomycotic Oral Infection (Modern Dental Implants and Root Canals)

R.S. Carlson DDS*

Inventor of the Carlson Bridge®, Honolulu, Hawai, USA

Corresponding Author: R.S. Carlson, Inventor of the Carlson Bridge®, Honolulu, Hawai, USA. Email: ddscarlson@hawaiiantel.net **Citation:** R.S. Carlson. Actinomycotic Oral Infection (Modern Dental Implants and Root Canals). Int J Dent & Oral Heal. 3:8, 82-96 DOI: 10.25141/2471-657X-2017-8.0069

Copyright: ©2017 R.S. Carlson. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Received: September 13, 2017; Accepted: September 21 2017; Published: October 25, 2017

Introduction

If one were to inspect the general research regarding the effectiveness and physiological acceptability and safety of the modern dental implant tooth replacement, one is met with a "mixed bag of information" on their real success rates, systemic biological impacts, and advisability as a method of single or multiple tooth replacement. For example, reported in various credible peer reviewed journals for the years 2016 and 2017 we see that, contrary to the touted 98% success rate asserted about by the implant manufacturers, it is widely held that "success" can vary from about 91 % to 49% over a three to five year period or longer depending on the opinion of the clinical observer(s). The main issue that has been identified for implant degradation and ultimate re-treatment or removal of the implant is **PI—** "**Peri-Implantits**"

Charalampakis et al, in their paper of 2013 from Gothenburg titled Periimplantitis from a microbiological perspective, stated it precisely: **"Thus, the prospect of reaching a consensus (regarding PI) is continuously hampered and the magnitude of the incidence of peri-implantitis still remains therefore** <u>a matter of</u> <u>academic dispute.</u>"

Charalampakis et al continue

"Any factor proposed to be a risk factor for...peri-implantitis should not just be an extract of a statistical significant result in <u>a paper</u> but relate to the disease with <u>biological plausibility</u>."

We would like to present biological plausibility not only relating to the implant post or fixtures locally but to the **<u>oral systemic bi-</u>**<u>ota</u>—the total human.

We are not "academics" but clinical scientists. We shall not enter discussions of the "life-span" of implants, their functionality, their being the so-called "golden standard" of our tooth replacement in our profession—prosthetic dentistry—but we shall offer a brief clinical scientific review of our observations and research.

The first biological factor is that of microbial infection within the soft tissues and bone about the dental implant. The second biological factor is that of the direct currents (DC electrical currents) generated by the implant fixtures, post, abutment, and replacement

crown. Let us explore both of these factors that fulfill the parameter of <u>biological plausibility</u> in the ensuing conversation and be open to our further exploration.

Actinomyces and Actinomycosis

I the early 1980s we began to remove infected root canal teeth and associated soft tissue and bone (Odonton) and send them for pathological inspection by a board certified histopathologist. The findings were remarkably revealing to this date.

In brief all of the 349 "odontons" inspected it was found that acute-chronic inflammation—sometimes marked, reactive bone, dead bone, osteomyelitis, granuloma, cyst, abscess and other attending abnormalities were present in the jaw below the tooth in question. Having carried this root canal research on since about 1983, we have also extended this methodology to implant removal due to infections or otherwise.

Background on factors causing "marked acute-chronic inflammation." As we know the dead tooth has no circulatory system internally—in a sense this is the definition of an endodontically treated tooth. As the dead tooth degrades it gives off various chemicals such as putresciene, cadaverine, thioethers, and what we call "endo-toxins." This fact is no longer disputed in the scientific clinical profession, not in academia either.

Another factor for inflammation is bacterial presence in tissues where they should not be. As a habit in the early days of our research the pathologist noted what he called "star-like microganisms" in colonies with rays in the bone and soft tissues. He noted that they were certainly colonies of actinomyces that surrounded the root canal. However, it must be understood that we had not asked for a determination of bacterial review, it was an incidental finding in his pathology reports to me.

Actinomyces in know from the 1800s as the "ray fungus," mistaken as a fungus until about 1938. It is currently identified a bacterium: Actinomyces is a genus of the Actinobacteria class of bacteria. They are all gram positive. Actinomyces species are facultatively anaerobic and they grow best under anaerobic conditions. Actinomyces species may form endospores, and, while individual bacteria are rodshaped, Actinomyces colonies form fungus-like branched networks of hyphe.

They are implicated in decay and gum or perio disease in the oral cavity since normal residents. However, it is not normal to find actinomyces in bone or connective tissues deep in the other jawbone or in the blood vascular system. If found in the jaw bone it may lead to a condition known as "luppy jaw"—an abscess from either dental or peri-dental origins, or both. Systemically it may lead to Actinomycosis a condition where abscesses occur—through circulatory migration or facial migration—into jaw, throat, lungs, abdomen, genital areas.

Actinobacteria are normally present in the gums and are the most common cause of infection in dental procedures and oral abscesses. Many Actinomyces species are opportunistic pathogens of humans and other mammals, particularly in the oral cavity. In rare cases, these bacteria can cause actinomycosis, a disease characterized by the formation of abscesses in the mouth, lungs, or the gastrointestinal tract. Actinomycosis is most frequently caused by A Israeli, which may also cause endocarditis, though the resulting symptoms may be similar to those resulting from infections by other bacterial species. Aggreatibacter actinomycetemcomitans has been identified as being of note in periodontal disease.

The genus is typically the cause oral-cervicofacial disease. It is characterized by a painless "lumpy jaw". Lymphadenopathy is uncommon in this form of the disease. Another form of actinomycosis is thoracic disease, which is often misdiagnosed as a neoplasm, as it forms a mass that extends to the chest wall. It arises from aspiration of organisms from the oropharynx. Symptoms include chest pain, fever, and weight loss.

Abdominal disease is another manifestation of actinomycosis. This can lead to a sinus tract that drains to the abdominal wall or the perianal area. Symptoms include fever, abdominal pain, and weight loss. Some Actinomyces species have also been shown to infect the nervous system of some animals without apparent trauma.

The bacteria Actinomyces are ubiquitous and abundant in soil. They are known for the important role they play in soil ecology; they produce a number of enzymes that help degrade plant root debris and waste materials. Thus their presence is important in the formation of compost. They are also known for causing diseases in humans and livestock, usually when they get an opportunity to gain access to the body's interior through wounds. As with other opportunistic infections, people with immunologic issues are at higher risk. In all of the preceding traits and in their branching filament formation, they bear similarities to Norcardia causing Norcardosis a similar illness as Actinomycosis.

It is well established that actinomycosis is an endogenous infec-

tion. The causative Actinomyces species reside on mucosal surfaces and gain access to deeper tissues via trauma, surgical procedures, or foreign bodies, which disrupt the mucosal barrier. Inside the tissue, these bacteria form masses consisting of aggregates of branching, filamentous bacilli. Actinomycosis is defined as a hard mass-type lesion with a specific histopathological structure. There are a large number of case reports of actinomycosis in the literature, but in most cases, diagnosis has been based solely on clinical and histopathological findings. In the majority of early reports, microbiological confirmation of diagnosis was lacking. Even when microbiological assessment was included, culture was typically the only method used. If, however, antimicrobial treatment had been started before sample collection, the results of culture may be falsely negative. The increasing introduction of molecular bacterial detection and identification methods is helping to overcome such problems.

An internal abscess is more difficult to identify, but signs include pain in the affected area, a high temperature, and generally feeling unwell. Internal abscesses rarely heal themselves, so prompt medical attention is indicated if such an abscess is suspected. This is important in the resolution of infected abscessed teeth, that they be surgically removed and bone cleansing—cavitation—accomplished.

Dental Implant Associated Mircro Currents

Rarely mentioned in any research in this day is the impact of direct currents on the tissues around the metal implant-corrosion impact. The human cellular structures operate electrically in all actions in pico-ampers, 10-12 amperers. Tiller related in Vibrational Medicine by Gerbber1987 that currents greater than pico-amps (in the direction of nano-amps 10-9 and micro-amps 10-6) will cause cell destruction while currents smaller than pico-amps stimulate cellular growth. In our measurements of this phenomenon in titanium implants we have recorded amps -36 uA (uA = micro-amps) and even higher—over -100uA—when the coupled anode and cathode is to gold crowns, metal bridges, metal partials and amalgam fillings. This is an area ripe for investigation for both titanium and zirconia dental implants. Galvanic impacts on human tissues are well known but little studied. In the removal of infected and problematic dental implants we have found also the deleterious impact associated with deep dental structures beyond the post above the gum, deep in the bone crypt. Again, we have over the past 17 years removed various dental implants (about 30) in 20 patients and sent them to the histopathologist at Queen's Hospital Honolulu, Hawai'i. We present the data of both the "root canal teeth" study and the "implants" study in two tables. The first table will show implants alone and the second all teeth and implants removed since 1986.

Table1. Dental Implants

1	Female	Age 64	Implant # Metal im plant #29	Pathology Periapical granuloma, chronic	Bacteria (+) Actionmyc
1.	Female	04	-		(+) Actionmyc
			uA -30 (with 28 DFC decay?)	inflammation, necrotic bone	
2.	Female	56	Metal in plant #4	Fibrosis, chronic inflammation, reactive	(-)
	11/2/15		(with sinus	bone lesions	
			perforation)		
3.	Female	69	Metal Implant #29/30	Periapical granuloma (prei-implantitis),	(-)
	2/2/15		area	acute/chornic inflammation, reactive	
				bone	
4	Male	65	Zirconia Implant Posts	Periapical Granuloma with pus, marked	(+) Actinomyc
	10/7/14		#18 and #19 area	acute/chonic inflammation with fibrosis	(.,
	10///11			and reactive bone	
5.	Male	65	Zirconia Implant Post	Periapical Granuloma, marked	(+) Actinomyc
	9/26/14		#30 and #29 area	acute/chronic inflammation	
б.	Male	70	Titanium Implant	Peridental Fibroma / Scar, chronic	(-)
	8/21/14		Posts # 9	inflammation, dead bone	
7.	Female	76	Titanium Implant	Peri-implantitis / Osteosis Marked acute	(+) Actinomyc
	9/27/13		Posts #18, #19, #20 c	chronic Inflammation	
			uA -26 and mV -265	Reactive Bone	
8.	Female	63	Implant Post #4 #6	Peri-implantitis / osteitis	(+) Actinomyc
۰.	8/3/13	~	(Titanium Metal) with	Chronic Inflammation	(.) Hoallonlye
	0/0/10		-36 uA Current	Devitalized (Dead) Bone	
			Density	Reactive Bone	
9.	Male	72	Titanium Implant Post	Granulation Tissue/Fibrosis	(+) Actinomy
У.	Male 2/23/13	72	-	Marked acute/chroinic Inflammation	(+) Acunomyc
	2/23/13		#14 Area	Reactive Bone	1
10	E1				
10.	Female	60	Titanium Implant	Periapical Granuloma (Fibrous) with	(-)
8/6/10		#12 and #13	marked acute/chronic inflammation.	1	
				Dead Bone/ reactive bone.	
11.	Female	62	Titan Implant # 6	Peri-implantitis, Granulation and	(+) Actinomyc
	5/16/07			Fibrosis, Chronic inflammation,	1
				Reactive Bone	
12.	Female	59	Titan Imp #8	Granulation tissue, fibrosis,	(-)
	7/3/06			Chronic inflammation	
13.	Female	71	Titan Implant #11,#12	Perimplant mucositis, chronic acute	(-)
	8/9/05			inflammation, inflamed granulation	
				tissue(granuloma) Reactive Bone	1
				Changes	
14.	Male	74	Titan Implant #17, #18	Peri-implantitis, Chronic inflammation,	(-)
	6/27/05			Granulation tissue	
				Reactive Bone	
15.	Male	74	Titan Implant #30, #31	Peri-implantitis, Chronic inflammation	(+)Actionmyc
	4/4/05			and fibrosis, hyperostotic bone,	, , ,
				reactive bone	
16	Male	54	Titan Implant #20	Peri-implantitis, marked chronic-acute	(+)Actionmyc
10.	3/21/05	1	- roun asseguant # 20	inflammation	(,). Leading of
				Reactive Bone	
17	Female	55	Titan Imp #30 #31	Periapical Granuloma, Dead Bone,	(-)
± / -	9/29/01		110an 110p #50 #51	Chronic inflammation	
10	Female	78	Titanium Post #3	Peri-implantitis Osteitis.	(1) Actine
10.		/8	1 Italiuum Post #5	Chronic Inflammation granulation	(+) Actinomyc
	3/10/01			tissue/fibrosis	1
				Devital (Dead) Bone	1
10	E1		The strength of the State		
19.	Female	22	Titanium Implant #7	Peri-implantitis, Chronic inflammation,	(-)
	6/8/99			Reactive bone-epithelial changes	
				parakaratosis and acanthosis	1

19 patients with 30 implants

10 of the 19 had (50%) Actinomyces, infectingattachment tissues (bone-ligaments).

Histo-Patholoical Studies 1986-2017 of Soft Tissue & Bone About The Roots of Endo Teeth and Metal Implants Done at Queens Hospital Honolulu, Hawaii

Table 2. Endo Teeth and Dental Implants

Gender		Age	Endo Tooth #	Pathology	Bacteria
Female	5/20/17	68	Titanium Implant	Periapical granuloma/abscess, marked	(+)
			#29 Abscess on	chronic inflammation, necrotic bone	Actionmyces
			m ental foram en -83uA		
Male	5/19/17	68	18	Periapical abscess/granuloma, marked	(+)
				acute/chronic inflammation, necrotic	Actinomyces
				bone	
Male	12/1/16	29	8,9,10	Periapical abscess/granuloma , marked	(+)
				acute chronic inflammation	Actinomyces
Male	11/13/16	54	13	Periapical scar, fibrosis	(-)
Female	11/11/16	54	18, 19	Radicular Cyst, granulation fibrosis with	(-)
				marked acute/chronic inflammation and	
				reactive bone	
Male	9/26/16	65	19	Periapical Granuloma/Cyst acute	(+)
				choronic inflammation, reactive bone	
Female	8/27/16	88	19	Periapical Granuloma Cyst, marked	(+)
				acute chroinic inflammation, reactive	Actinomyces
				bone	
Male	7/14/16	52	3	Radicular Periapical Cyst, acute/chronic	(+)
				inflammation, granulation/fibrous tissue.	Actinomyces
Female	7/9/16	55	13	Radicular Periapical Cyst, marked acute /	(+)
				chronic inflammation, massive	
				granulation tissue and reactive bone.	
Female	6/23/16	75	20	Radicular Periapical Cyst, granulation	(-)
				fibrous tissue, chronic inflammation	
Female	5/10/16	67	18	Periapical Granuloma (abscess) with	(+)
				marked acute chronic inflammation	
Female	2/29/16	66	18	Radicular (Periapical) Cyst, cystic lesion	(-)
				with granulation tissue and marked acute	
				chornic inflammation	
Male	2/16/16	72	18/19	Radicular Cyst, granulation fibrous tissue	(-)
				acute/chronic inflammation.	
Female	2/15/16	57	18/19	Fibrosis/ Reactive bone lesions	(-)
Female	1/28/16	60	5	Squamous Mucosa with acute and	(-)
				chronic inflammation	
Female	1/8/16	60	4	Periapical radicular cyst, granulation	(+)
				tissue acute/chronic inflammation	
Female	11/12/15	52	9	Periapical fibrosis/scar, acute/chronic	(-)
				inflammation, reactive bone lesions	
Female	11/2/15	56	Metal im plant #4	Fibrosis, chronic inflammation, reactive	(-)
			(with sinus	bone lesions	
			perforation) -63 uA		
Female	11/2/15	56	29,30,31	Periapical Granuloma, chronic	(-)
				inflammation, reactive bone lesions	
Female	10/24/15	33	8,9	Periapical Granuloma/Cyst, marked	(+)
				acute chronic inflammation, necrotic	
				bone	
Female	10/24/15	33	4,5	Periapical Granuloma/Scar, chronic	(-)
				inflammation, reactive bone lesions	
Female	8/31/15	60	13	Periapical Granuloma, Cyst chronic	(+)
				inflammation, inflamed mucosa	
Female	8/28/15	48	29	Periapical Granuloma/Cyst, marked	(-)
				acute/chronic inflammation, fibrosis,	

				necrotic bone	
Female	8/27/15	33	2,3	Periapical Granuloma/Cyst, marked acute/chronic inflammation, fibrosis,	(-)
				reactive bone	
Male	7/31/15	64	3	Periapical Granuloma, fibrosis, marked	(-)
			_	chronic inflammation	``
Female	7/28/15	35	29	Peripaical/Radicular Cyst/Granuloma	(+)
				Acute/chronic inflammation, reactive	
				cpithelium, reactive bone	
Female	7/16/15	46	15	Periapical Radicular Cyst/Granuloma	(-)
				Chronic inflammation, reactive	
	60005			epithelium, reactive bone	
Female	6/18/15	61	31	Periapical Radicular Cyst, marked acute/chronic inflammation, reactive	(+)
				bone, fibrosis	
Male	6/13/15	77	3,4	Periapical granuloma/cyst, marked	(+)
IVIAIC	0/15/15		5,4	acute/chronic inflammation, reactive	(+)
				bone	
Female	6/3/15	67	12	Periapical granuloma, marked	(-)
				chronic/acute inflammation	
Female	5/28/15	61	14	Periapical scar, chronic inflammation,	(-)
				reactive bone	17
Female	5/26/15	59	18/19	Periapical Granuloma/Cyst, marked	(-)
				acute chronic inflammation, reactive	
				bone	
Female	5/9/15	54	3	Periapical Granuloma/Cyst, acute	(+)
				chronic inflammation	
Female	4/23/15	64	29	Periapical Granuloma/Cyst,	(+)
Female	4/17/15	69	19	acute/chronic inflammation Periapical Granuloma, acute/chronic	1
Female	4/1//13	4/1//15 09	05 15	inflammation, "devitalized bone" dead	(-)
			bone		
Female	4/14/15	61	2	Periapical Granuloma, acute/chronic	(-)
			-	inflammation, reactive bone	· /
Female	3/21/15	73	10	Periapical Granuloma, acute/chronic	(-)
				inflammation	
Female	3/19/15	68	10	Radicular (Periapical) Cyst, granulation	(-)
				tissue with fibrosis, acute / chronic	
				inflammation, reactive bone	
Male	3/10/15	35	19	Radicular (Periapical) Cyst, granulation	(-)
				tissue with fibrosis, acute/chronic inflammation	
Female	2/2/15	69	Metal Implant #29/30	Periapical granuloma (prei-implantitis,	(-)
Pennaie	2/2/13		area -45 uA	acute/chornic inflammation, reactive	(-)
				bone	
Male	1/31/15	86	2	Radicular (periapical) cyst, acute/chronic	(+)
				inflammation, reactive bone	
Female	1/29/15	69	5,3	Reactive and Devitalized (dead) bone	(+)
Male	1/19/15	27	13	Periapical Granuloma, fibrosis,	(+)
				acute/chronic inflammation, reactive	
	10615			bone	~
Male	1/16.15	86	18	Periapical Granulma/Cyst, fibrosis,	(-)
				acute/chronic inflammation, reactive bone	
Female	1/10/15	83	31	Periapical Granuloma/Cyst fibrosis,	(-)
remaic	1/10/15		51	acute/chronic inflammtion	10
Male	1/9/15	63	9	Periapical Granuloma/Cyst, fibrosis,	(+)
-				acute/chronic inflammation	
Female	1/6/15	71	7	Periapical Granuloma/Scar, fibrosis,	(-)
				acute/chronic inflammation	
Female	12/22/14	70	3	Periapical Granuloma/Cyst, fibrosis,	(+)
				marked acute/choronic inflammation,	
				reactive bone	
Male	12/17/14	40	30	Periapical Granuloma/Cyst, Chronic	(-)
	10.000	42		inflammation, fibrosis, reactive bone	4.3
Female	12/17/14	43	19	Radicular (Periapical) Cyst, marked acute/chronic inflammation, fibrosis,	(+)
			1	acture/contonic inflammation fibroria	1

				granuloma	
Female	12/7/14	70	15	Periapical Granuloma/Cyst, mareked chronic and acute inflammation	(-)
Female	11/7/14	70	12	Periapical Granuloma, marked acute/chronic inflammation, reactive bone	(-)
Female	11/5/14	73	3	Radicular Cyst (Periapical) acute/chronic inflammation, fibrosis, reactive bone	(+)
Male	10/7/14	65	Zirconia Implant Posts #18 and #19 area	Periapical Granuloma with pus, marked acute/chonic inflammation with fibrosis and reactive bone	(+)
Female	10/1/14	82	18	Periapical Granuloma with pus, marked acute/chronic inflammation with fibrosis and reactive bone	(-)
Male	9/26/14	65	Ziconia Implant Post #30 and #29 area	Periapical Granuloma, marked acute/chronic inflammation	(+)
Male	8/21/14	70	Titanium Implant Posts # 9	Peridental Fibroma / Scar, chronic inflammation, dead bone	(-)
Male	8/14/14	51	14	Periapical Granuloma, acute/chronic inflammation, reactive bone	(-)
Female	8/14/14	66	29,31	Periapical Granuloma / Scar, Chronic Inflammation reactive bone	(-)
Male	8/8/14	70	14, 15, 16	Periapical Granulomas, marked acute/chronic inflammation, dead bone, fibrous tissue	(+)
Male	7/28/14	70	30	Periapical Granuloma, chronic inflammation, reactive bone	(-)
Female	6/26/14	23	9	Periapical Granuloma/Scar, Fibrosis, chronic inflammation with reactive bone	(-)
Female	6/22/14	77	4	Periapical Granuloma/Cyst, granulation/fibrous tissue, marked acute/chronic inflammation	(+)
Female	6/22/14	64	6	Periapical Scar, chronic inflammation, reactive bone	(-)
Female	6/16/14	80	14	Periapical Abscess/Granuloma, marked acute/chronic inflammation, Necrotic Bone	(+)
Female	6/16/14	80	12	Periapical Abscess/Granuloma, marked acute/chronic inflammation, Necrotic Bone	(+)
Male	6/12/14	34	29	Periapical Cyst/Granuloma, marked acute/chronic inflammation Reactive Bone	(-)
Female	6/5/14	66	3	Radicular Cyst (Periapical) marked acute chronic inflammation, granulation/fibrous tissue Osteonecrosis (dead bone)	(+)
Female	5/21/14	44	9	Periapical scar/fibrosis, reactive bone	(+)
Female	5/13/14	64	30	Focal Osteonecrosis, necrotic bone, reactive bone, squamous mucosa	(+)
Male	5/5/14	34	18	Periapical granuloma, chronic inflammation, fibrosis, reactive bone, degenerated bone (dead bone)	(-)
Female	4/22/14	59	18	Periapical granuloma/scar, mild chronic inflammation, reactive bone	(-)
Female	4/19/14	68	7	Radicular (Periapical) Cyst, granulation/fibrous tissue with marked acute and chronic inflammation, reactive bone	(+)
Male	4/7/14	47	14	Periapical Granuloma Cyst, granulation/fibrous tissue with marked acute/chronic inflammation, Dead Bone	(-)
Female	4/4/14	64	3	Radicular Periapical Cyst, granulation/fibrous tissue, marked chronic/acute inflammation, Dead Bone	(-)
Female	4/4/14	49	14	Periapical Granuloma/Cyst, granulation/fibrous tissue with chronic inflammation	(-)

Female	3/21/14	42	10	Periapical Granuloma/Abscess, marked	(-)
				acute/chronic inflammation with fibrosis	
				and granulation tissue, Dead bone,	
				reactive bone consistent with	
				"osteom yelitis"	
Male	3/11/14	57	14, 15	Periapical Cyst/Granuloma, marked	(+)
				acute/chronic inflammation, Reactive	
	0.00.01.4			Bone	
Female	2/22/14	66	6	Periapical abscess/granuloma, marked	(+)
				a/c inflammation, Partially dead and	
			10.10	reactive bone	
Male	2/4/14	70	18,19	Cystic Granuloma/marked acute-chronic	(-)
				inflammation, Reactive Bone	
Female	1/24/14	43	10	Cystic Granuloma/ tissue with marked	(-)
				inflammation, Chronic and Acute Reactive Bone	
) (-l-	1/14/14	61	4		4.5
Male	1/14/14	61	4	Periapical scar/fibrosis, Osteonecrosis	(+)
				(Dead Bone) Patient has bowl	
				cancer—this tooth #4 and two others #12 & #19 on the same meridian were	
				root cadavers. CA dx 6m o ago	
) (-1-	1/12/14	60			4.3
Male	1/13/14	63	29	Periapical granuloma/scar, AC Inflam, dead dentine/cem entum, numerous	(+) Candida 1st
				Actinomyces /Candida	
Male	1/11/14	34	30		(Actinomyces)
Male	1/11/14	54	50	Periapical granuloma, AC inflammation,	(-)
Esseria	12/7/13	44		Reactive bone, fibrosis	4.5
Female	12/7/13	44	2	Periapical abscess/scar	(+)
				Reactive/Necrotic(dead) bone and fibrous tissue	
Female	11/21/13	66	28	Periapical granuloma/Scar	()
Female	11/21/15	00	20	Chronic inflammation,	(-)
				Reactive Bone	
Male	11/11/13	26	10	Periapical granuloma (Fistula with pus)	()
Male	11/11/15	20	10	Marked AC inflammation	(-)
				Reactive Bone	
Female	10/7/13	53	19	Periapical granuloma/scar	(-)
Pennaie	10///15	55	19	AC Inflammation underlying fibrosis	(-)
				Reactive bone	
Female	9/27/13	76	Titanium Implant	Peri-implantitis / Osteosis Marked AC	(+)
remarc	9/2//15		Posts 18, 19, 20 with	Inflammation	(+)
			uA -26 and mV -265	Reactive Bone	
Female	9/24/13	53	18/19	Periapical Granuloma Scar	(-)
1 0112110	5721125		10,15	Chronic Inflammation	
				Devitalized (Dead) Bone	
Female	9/9/13	37	30	Periapical Scar	(-)
remarc	5/5/13			Chronic Inflammation	(9)
				Reactive Bone	
Female	9/5/13	16	26	Periapical Granuloma Cyst	(-)
remarc	515115	10	20	Chronic Inflammation	
				Devitalized (Dead) Bone	
				Reactive Bone	
Male	8/27/13	63	30	Periapical Abscess Granuloma Marked	4
Maic	0/2//15	0.5	30	AC Inflammation	(-)
				Devitalized (Dead) Bone	
				Reactive Bone	
Female	8/19/13	80	2	Periapical Granuloma	(-)
1 officio	100 A.V. 1.J.	1.00	1	Chronic Inflammation	
				Reactive Bone	
Female	8/3/13		Implant Post #4 #6	Peri-implantitis / osteitis	(+)
		63	(Titanium Metal) with	Chronic Inflammation	
			-36 uA Current	Devitalized (Dead) Bone	
			Density	Reactive Bone	
Female	7/31/13		30	Apical Osteitis	(-)
		58		Devitalized (Dead) Bone	· · ·
				Reactive Bone	
		1	1		
Female	7/11/13		5	Periapical Radicular Cyst	(+)
Female	7/11/13	63	5	Periapical Radicular Cyst AC Inflammation	(+)

		53		AC Inflammation	
		55		Reactive Bone	
Female	6/19/13	63	14	Periapical Granuloma Cyst	(+)
				Marked AC Inflammation	
				Reactive Bone	
Female	6/18/13		32	Periapical Scar	(+)
		56		Chronic Inflammation	
Female	6/6/13		13	Reactive Bone	(1)
Female	0/0/15	36	15	Periapical Scar Reactive Bone	(+)
Female	6/4/13	30	31	Radicular Cvst	(-)
remarc	0.4.15	66	51	Marked AC Inflammation	()
		1		Reactive Bone	
Female	4/8/13		18	Periapical Granuloma	(-)
		40		Chronic Inflammtion	
				Reactive Bone	
Female		59	30	Periapical Granuloma Chronic inflamma.	(-)
Female	3/30/13		4	Periapical Granuloma Fibroma Chronic	(-)
		36		Inflamm	
Female	3/28/13		31	Periapical Granuloma Fibroma Chronic	(+)
		69		Inflamm	
				Reactive/Hyperostotic Bone	
Female	3/8/13	61	3	Periapical Radicular Cyst Marked AC Inflammation	(+)
		01		Reactive Bone	
Male	3/5/13		20	Periapical Scar, slight inflammation	(+)
Mate	5.5/15	68	20	Devital (Dead) Bone	(+)
Male	2/23/13		Titanium Implant Post	Granulation Tissue/Fibrosis	(+)
241LLC	2,25,25	72	#14 Area	Marked AC Inflammation	(.)
			-80uA	Reactive Bone	
Female	2/19/13		21	Periapical Granuloma	(-)
		NG		Marked Chronic Inflamm.	.,
Female	2/11/13		19	Periapical Scar	(+)
		76		Slight Chronic Inflamm.	
				Reactive Bone	
Male	2/9/13		8	Periaipical Granuloma Scar Chronic	(-)
		66		Inflamm	
				Reactive Bone	
Female	1/31/13	NG	29	Periapical Granuloma Chronic Inflammation	(-)
		NG			
Male	1/22/13		8	Reactive Bone Periapical Radicular Cyst	(1)
Maic	1/22/15	82	°	Marked AC Inflammation	(+)
Female	1/14/13	02	14	Periapical Cyst	(+)
1 0111110	1,14,15	64		Marked AC Inflammtion	(*)
				Reactive Bone	
Female	12/12/12		14	Fibroma, Inflammation,	(+)
		56		Reactive Bone	
Female	12/4/12		4/5	Inflammation and	(-)
		73		Reactive Bone	
Female	12/4/12		3	Periapical Granuloma Cyst	(+)
		49		Marked AC Inflammation	
				Reactive Bone	
	Male 11/21/12	1	13	Periapical Granuloma AC Inflammation	(+)
Male	11/21/12	60			1
Male	11/21/12	60			< Actinomason
		60	24/25	Devital (Dead) Bone	<actinomyces></actinomyces>
	11/21/12		24/25	Devital (Dead) Bone Periapical Granuloma	<actinomyces> (-)</actinomyces>
		60 46	24/25	Devital (Dead) Bone Periapical Granuloma AC Inflammation	
Female			24/25	Devital (Dead) Bone Periapical Granuloma AC Inflammation Reactive Bone	(-)
Female	11/10/12			Devital (Dead) Bone Periapical Granuloma AC Inflammation	
Female	11/10/12	46		Devital (Dead) Bone Periapical Granuloma AC Inflammation Reactive Bone Periapical Granuloma	(-)
Female Female	11/10/12	46		Devital (Dead) Bone Periapical Granuloma AC Inflammation Reactive Bone Periapical Granuloma AC Inflammation	(-)
Female Female	11/10/12 11/10/12	46	14	Devital (Dead) Bone Periapical Granuloma AC Inflammation Reactive Bone Periapical Granuloma AC Inflammation Reactive Bone	(-)
Female Female	11/10/12 11/10/12 11/6/12	46	14 30	Devital (Dead) Bone Periapical Granuloma AC Inflammation Reactive Bone Periapical Granuloma AC Inflammation Reactive Bone Periapical Granuloma Reactive Bone (Condensing Osteitis: (non-supurative Osteom yelitis)	(-)
Female Female	11/10/12 11/10/12	46	14	Devital (Dead) Bone Periapical Granuloma AC Inflammation Reactive Bone Periapical Granuloma AC Inflammation Reactive Bone Periapical Granuloma Reactive Bone (Condensing Osteitis:	(-)

		57		Immature bone/cementum fibrous tissue	
Male	9/27/12	66	5	Periapical Granuloma Marked AC Inflammtion Devitalized (Dead) Bone	(-)
Female	9/11/12	55	4	Partially Devitalized Bone (Dead Bone) Marked Chronic Inflammation	(+)
Male	8/30/12	51	9	Periapical Granuloma Cyst Marked Acute Chronic Inflammation	(-)
Female	8/6/12	60	19	Chronic Osteomyelitis Dead & Reactive Bone	(-)
Male	7/20/12	58	30	Chronic Inflammation Periapical Granuloma AC Inflammation	(-)
Male	7/20/12		7/8	Reactive Bone Periapical Cyst	(-)
Female	5/16/12	58 77	30	Acute Chronic Inflammation Periapical Granuloma Marked AC Inflammation	(+)
Male	5/17/12	60	19	Reactive Bone Periapical Granuloma Abscess/ Marked Acute Chronic Inflammation	(-)
Male	5/11/12	31	30	Reactive Bone Periapical Granuloma Marked AC Inflammation	(-)
Male	5/2/12	35	18	Periapical Granuloma Scar Chronic Inflammation Reactive Bone	(-)
Female	4/10/12	51	20	Periapical Granuloma Marked Acute Chronic Inflammation	(-)
	3/17/12	55	12	Periapical Scar cute Chronic Inflammation	(-)
Female	2/28/12	60	30	Periapical Scar Chronic Inflammation Reactive Bone	(+)
Female	2/28/12	60	3	Periapical Granuloma Chronic Inflammation Reactive Bone	(-)
Female	1/3/12	42	2	Periapical Radicular Cyst Marked Acute Chronic Inflammation Reactive Bone	(-)
Male	8/17/11	40	8/9	Periapical Granuloma Marked Chronic Inflammation	(+)
Female	7/20/11	29	Vital #29 (Pl Test 7.5)	Periapical Grauloma Scar	(+)
Female	6/30/11	64	8/10	Periapical Granuloma Cyst Chronic Inflammation Reactive Bone	(-)
Female	5/4/11	31	4	Periapical Granuloma Scar Chronic Inflammation	(-)
Female	3/2/11	31	19	Periapical Granuloma Scar Granulation/Fibrous Tissue Chronic Inflammation	(-)
Male	11/2/10	68	3	Periapical Granuloma Acute Chronic Inflammation Reactive Bone	(+)
Male	8/13/10	75	30	Periapical Granuloma Marked Acute Chronic Inflammation	(+)
Female	8/6/10	60	Titanium Implant #12 and #13	Periapical Granuloma (Fibrous Tissue) with marked acute/chronic inflammation. Dead Bone, reactive bone.	(-)
Female	8/4/10	66	28/29	Periapical Granuloma Marked Acute Chronic Inflammation Reactive Bone	(-)
Female	4/23/10	51	3	Periapical Granuloma Acute Chronic Inflammation	(-)
Male	4/15/10	56	20	Periapical Granuloma Scar Chronic Inflammation	(-)

Male 224/10 4 21 Periagical Sear Chronic Inflarmation Periagical Granuloms marked Acute Chronic Inflarmation Reactive Bose (.) Male 11/10/10 55 14/15 Periagical Granuloms Chronic Inflarmation (.) Female 14/10 61 4 Decimical Granuloms Chronic Inflarmation (.) Female 14/10 61 4 Decimical Granuloms Stat Chronic Inflarmation (.) Female 7/10/09 60 10 Periagical Granuloms Stat Chronic Inflarmation (.) Female 7/10/09 3 3 Periagical Granuloms Cyst Chronic Inflarmation (.) Male 7/209 3 3 Periagical Granuloms Cyst Chronic Inflarmation (.) Male 6/10/09 75 31 Periagical Granuloms Cyst Chronic Inflarmation (.) Male 5/30.09 60 8.9.10.11 Periagical Granuloms Cyst Acute Chronic Inflarmation (.) Permale 5/20.09 50 3 Periagical Granuloms Marked AC (.) Male 5/20.09 5 3 </th <th></th> <th></th> <th></th> <th>· · · · · · · · · · · · · · · · · · ·</th> <th></th>				· · · · · · · · · · · · · · · · · · ·	
Mait 1/19/10 - 29/30 Pertaplead Granuloms marked Acute Chronic Inflammation Reactive Bose (+) Penule 1/4/10 55 1/4/15 Pertaplead Granuloms Chronic Inflammation Reactive Bose (-) Penule 1/4/10 61 - Chronic Inflammation Reactive Bose (-) Penule 7/309 4 7 Pertaplead Granuloms Cart Chronic Inflammation Chronic Inflammation Chronic Inflammation Chronic Inflammation (-) Penule 7/1009 33 3 Pertaplead Granuoms Cyst Chronic Inflammation Chronic Inflammation (-) Male 7/209 58 - Acute Chronic Inflammation (+) Male 7/209 58 - Acute Chronic Inflammation (+) Male 7/209 58 - Acute Chronic Inflammation (+) Male 5/30.09 50 8 Pertaplead Granuoms Cyst Chronic Inflammation (+) Male 5/30.09 50 8 Pertaplead Granuloms Atuted AC Inflammation (+) Male 5/20.09 5 9	Male 2/24/10		21		(-)
Image Image <th< td=""><td>Male 1/10/10</td><td></td><td>20/20</td><td></td><td>(.)</td></th<>	Male 1/10/10		20/20		(.)
Female Image: Construction of the second of th	Male 1/19/10		29/30		(+)
Female 14/10 55 14/15 Peraptical Granuloma Chronic Inflammation (·) Female 1/4/10 61 4 Peraptical Granuloma Scar (·) Female 7/3/09 45 7 Peraptical Marked Acture Chronic Inflammation reactive Bone (·) Female 7/3/09 46 7 Peraptical Granuloma Cyst Chronic inflammation (·) Female 7/3/09 3 Peraptical Granuloma Cyst Chronic inflammation (·) Male 7/2/09 5 9 Ractive Bone (·) Male 7/2/09 5 9 Ractive Bone (·) Male 7/2/09 5 9 Ractive Bone (·) Male 5/3/0.09 6 Peraptical Granuloma Cyst Acute (·) Male 5/2/0.09 8 Peraptical Granuloma Marked AC (·) Reactive Bone 15 Peraptical Granuloma Marked AC (·) Female 5/2/0/09 3 Peraptical Granuloma Marked AC (·) Female 1/3/0		48			
Female 14/10 6 Female 14/10 4 Perapted Granuloma Scar (.) Female 7/3/09 4 7 Perapted Granuloma Scar (.) Female 7/3/09 4 7 Perapted Granuloma Cyst (.) Female 7/16/09 60 10 Perapted Granuloma Cyst (.) Female 7/16/09 3 Perapted Granuloma Cyst (.) (.) Male 7/2/09 9 Radicular Perapted Granuloma Cyst (.) (.) Female 619/09 75 31 Perapted Granuloma Cyst Acute (.) Male 5/20/09 50 8 Perapted Granuloma Cyst Acute (.) Female 5/20/09 50 8 Perapted Granuloma Cyst Acute (.) Male 5/20/09 50 8 Perapted Granuloma Cyst Acute (.) Female 5/20/09 4 15 Perapted Granuloma Cyst Acute (.) Female 5/20/09 6 10					
Reactive Bone	Female 1/4/10	55	14/15		(-)
Female 14/10 4 Periapical Granutoma Scar (-) Female 7/3/09 4 7 Periapical Marked Acute Chronic Inflammation (+) Female 7/16/09 60 10 Periapical Granutoma Cynt (-) Female 7/7.09 33 9 Periapical Granutoma Scar (-) Male 7/2.09 58 9 Acute Chronic Inflammation (+) Female 619.09 75 31 Periapical Granutoma Cynt Acute (+) Male 69.09 69 8.9.10.11 Periapical Granutoma Cynt Acute (+) Male 5/30.09 6 Periapical Granutoma Cynt Acute (-) Male 5/30.09 5 Periapical Granutoma Cynt Acute (-) Male 5/30.09 6 Periapical Granutoma Cynt Acute (-) Male 5/30.09 5 Periapical Granutoma Cynt Acute (-) Male 5/30.09 6 Periapical Granutoma Cynt Acute (-) Female 5/30.09				Inflammation	
Penale 7.100 61 Chronic Inflammation Constraints Female 7.1309 45 7 Perinpical Markad Actus Chronic (+) Female 7.13609 60 10 Perinpical Annualisma Cyst (-) Reactive Bone 200 33 3 Paraptical Granuloma Cyst (-) Male 7.1209 33 9 Reactive Bone (-) Male 7.1209 58 9 Reactive Bone (-) Male 619/09 75 31 Perinpical Granuloma Cyst (+) Male 6/9/09 69 8.9.10.11 Perinpical Granuloma Cyst (+) Male 5/20/09 50 8 Perinpical Granuloma Cyst (-) Male 5/20/09 5 3 Perinpical Granuloma Cyst (-) Female 5/20/09 5 3 Perinpical Granuloma Cyst (-) Male 5/20/09 6 15 Perinpical Granuloma Cyst (-) Female				Reactive Bone	
Penale 7.100 61 Chronic Inflammation Constraints Female 7.1309 45 7 Perinpical Markad Actus Chronic (+) Female 7.13609 60 10 Perinpical Annualisma Cyst (-) Reactive Bone 200 33 3 Paraptical Granuloma Cyst (-) Male 7.1209 33 9 Reactive Bone (-) Male 7.1209 58 9 Reactive Bone (-) Male 619/09 75 31 Perinpical Granuloma Cyst (+) Male 6/9/09 69 8.9.10.11 Perinpical Granuloma Cyst (+) Male 5/20/09 50 8 Perinpical Granuloma Cyst (-) Male 5/20/09 5 3 Perinpical Granuloma Cyst (-) Female 5/20/09 5 3 Perinpical Granuloma Cyst (-) Male 5/20/09 6 15 Perinpical Granuloma Cyst (-) Female	Female 1/4/10		4	Periapical Granuloma Scar	(-)
Female 7/3.09 46 7 Perapical Marked Acute Chronic Inflammation reactive bone (+) Female 7/16.09 60 10 Perapical Granuloma Cyst Chronic Inflammation Reactive Bone (-) Female 7/7.09 33 3 Perapical Granuloma Scar Reactive Bone (-) Male 7/2.09 58 9 Radicular Periapical Granuloma Cyst Acute (+) Male 619.09 75 31 Periapical Granuloma Cyst Acute (+) Male 619.09 69 8.9.10.11 Periapical Granuloma Cyst Acute (-) Male 5/30.09 50 8 Periapical Granuloma Cyst Acute (-) Male 5/30.09 50 8 Periapical Granuloma Scar Reactive (-) Male 5/30.09 50 3 Periapical Granuloma Cyst Acute (-) Male 5/2/09 46 15 Periapical Granuloma Cyst Acute (-) Female 5/13/09 64 10 Inflammation (-) Female 2/26/		61	-	-	.,
Home 46 Inflummation reactive bone (c) Female 7/1609 60 10 Peringical Granuloma Cyst Chronic inflammation (c) Female 7/7.09 33 3 Peringical Granuloma Sar Reactive Bone (c) Male 7/2.09 58 9 Actute Chronic Inflammation (e) Male 6/9.09 75 31 Peringical Granuloma Cyst Acute (e) Male 6/9.09 60 8.9.10.11 Peringical Granuloma Cyst Acute (e) Male 5/30.09 50 8 Peringical Granuloma Cyst Acute (.) Male 5/20.09 50 8 Peringical Granuloma Cyst (.) Male 5/20.09 50 3 Peringical Granuloma Cyst (.) Male 5/20.09 3 Peringical Granuloma Cyst (.) (.) Female 5/13.09 64 10 Peringical Granuloma Cyst (.) Female 2/13.09 63 101 Peringical Granuloma Cyst Acute AC <t< td=""><td>Eemale 7/2/00</td><td></td><td>7</td><td></td><td>(.)</td></t<>	Eemale 7/2/00		7		(.)
Female 7/16/09 60 10 Perinpical Granuloma Cyst Chronic inflammation (-) Female 7/7/09 33 3 Perinpical Granuloma Scar Reactive Bose (-) Male 7/2/09 58 9 Radicular Perinpical Cyst Acus Chronic Inflammation (+) Male 6/9/09 75 31 Perinpical Granuloma Cyst Acute Chronic Inflam. (+) Male 6/9/09 6 8/9.10.11 Perinpical Granuloma Cyst Acute Chronic Inflam. (+) Male 5/2/009 50 8 Perinpical Granuloma Cyst Reactive Bose (-) Female 5/2/009 50 8 Perinpical Granuloma Cyst Reactive Bose (-) Female 5/2/009 55 9 Perinpical Granuloma Xated AC Inflammation (-) Female 5/2/009 64 10 Perinpical Granuloma Xated AC Inflammation (-) Female 5/13/09 63 18/19 Perinpical Granuloma With Oteonecrois (dead bone) (-) Female 2/13/09 63 9 11 Perinpical G	Female 7/3/09		1		(+)
Chemic Note: 60 Chemics inflammation Construction of the second of t					
Female 7/709 33 Bernipel Granuloms Sor Reactive Bone (-) Male 7/209 58 9 Aduet Chronic Inflammation (-) Female 6/19/09 75 31 Peringical Granuloms Sor Reactive Bone (+) Male 6/9/09 69 8.9.10,11 Peringical Granuloms Cyst Acute (+) Male 6/9/09 69 8.9.10,11 Peringical Granuloms, Marked AC (-) Male 5/3009 50 8 Peringical Granuloms, Marked AC (-) Female 5/27/09 46 15 Peringical Granuloms, Marked AC (-) Male 5/20/09 55 3 Moderate C-Inflammation (-) Female 5/27/09 46 15 Peringical Granuloms, Marked AC (-) Female 5/20/09 55 3 Moderate C-Inflammation (-) Female 2/26/09 60 18/19 Peringical Granuloms Arked AC (-) Female 2/13/08 56 9/11 Peringica	Female 7/16/09		10		(-)
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		60		Chronic inflammation	
Male 7/2/09 33 Pactive Bone Constrained and the second and the se				Reactive Bone	
Male 7/2/09 33 Pactive Bone Constrained and the second and the se	Female 7/7/09		3	Periapical Granuloma Scar	(-)
Male 7/2/09 58 9 Radicular Peringical Cyst Acute Chronic Inflammation (+) Female 6/19/09 75 31 Peringical Granuloma Cyst Acute Chronic Inflammation (+) Male 6/9/09 69 8.9.10,11 Peringical Granuloma Cyst Acute Chronic Inflammation (+) Male 5/30/09 69 8 Peringical Granuloma, Marked AC Inflammation (-) Female 5/27/09 15 Peringical Granuloma, Marked AC Inflammation (-) Male 5/20/09 55 3 Peringical Granuloma Marked AC Inflammation (-) Female 5/13/09 64 20 Peringical Granuloma Marked AC Inflammation (-) Female 2/26/09 58 18 Peringical Granuloma Marked AC (-) Female 2/13/09 63 18/19 Peringical Granuloma Marked AC (-) Female 2/13/09 5 Radicular Cyst Peringical Marked AC (-) Female 12/9/08 5 Peringical Granuloma Marked AC (-) Inflammation <td></td> <td>33</td> <td>-</td> <td></td> <td></td>		33	-		
Female 6/19/09 75 31 Acute Chronic Inflammation (+) Male 69/09 69 8.9.10, 11 Periapical Granuloma Cyst Acute (+) Male 69/09 69 8.9.10, 11 Periapical Granuloma Cyst Acute (+) Male 5/3009 50 8 Periapical Granuloma, Marked AC (-) Inflummation Reactive Bone (-) Reactive Bone (-) Penale 5/20/09 64 15 Periapical Granuloma, Marked AC (-) Female 5/13/09 64 20 Periapical Granuloma Marked AC (-) Female 4/10/09 18 Periapical Granuloma Marked AC (-) Female 2/13/09 63 18/19 Periapical Granuloma Marked AC (-) Female 12/13/08 56 9/11 Periapical Granuloma/Cyst Chronic (-) Female 12/13/08 56 9/11 Periapical Granuloma/Cyst Chronic (-) Female 12/9/08 63 10 Periapical G) (-1- 7/2/00				(1)
Female 6/19/09 75 31 Periapical Granuloma Cyst Acute Chronic Inflam. (+) Male 69/09 69 8.9,10,11 Periapical Granuloma Cyst Reactive bone (+) Male 5/30/09 50 8 Periapical Granuloma, Marked AC Influmation (+) Female 5/27/09 46 15 Periapical Granuloma, Marked AC Influmation (-) Male 5/20/09 55 3 Periapical Granuloma Marked AC Influmation (+) Female 5/13/09 64 20 Periapical Granuloma, Marked AC Influmation (-) Female 4/10/09 38 AC Influmation (-) Female 2/26/09 60 18/19 Periapical Granuloma with Osteonecrois (dead bone) (Fossamax Person) Female 2/13/08 5 9/11 Periapical Granuloma/Scar (-) Female 12/9/08 70 5 Radicular Cyst Periapical Marked AC (-) Inflammation 10/108 34 3 Periapical Granuloma/Cyst (-) Fe	Male //2/09		9		(+)
Male 619/09 69 8.9.10, 11 Periapical Granuloma Cyst (+) Male 5/20/09 50 8 Periapical Granuloma Cyst (-) Female 5/27/09 46 15 Periapical Granuloma, Marked AC (-) Male 5/27/09 46 15 Periapical Granuloma/Scar Reactive (-) Male 5/27/09 46 20 Periapical Granuloma/Scar Reactive (-) Female 5/13/09 64 20 Periapical Granuloma/Scar Reactive (-) Female 2/26/09 60 18/19 Periapical Granuloma/Abreces Marked AC (-) Female 2/13/09 63 Periapical Granuloma/Scar (-) Female 12/9/08 70 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 63 5 Periapical Granuloma/Scar (-) Female 10/6/08 3 Periapical Granuloma/Scar (-) Female 10/6/08 3 Periapical Granuloma/Scar (-)					
Male 69/09 69 8.9.10.11 Periapical Granuloma Cyst Reactive bone (+) Male 5/30.09 50 8 Periapical Granuloma, Marked AC Infimmation (-) Female 5/27/09 46 15 Periapical Granuloma, Marked AC Infimmation (-) Male 5/20/09 3 Periapical Granuloma Moderate C.Inflammation (-) Female 5/13/09 64 18 Periapical Granuloma Marked AC Inflammation (-) Female 2/26/09 64 18 Periapical Granuloma with (-) (-) Female 2/26/09 60 18/19 Periapical Granuloma with (-) (-) Female 2/26/09 63 9/11 Periapical Granuloma with (-) (-) Female 2/26/09 63 9/11 Periapical Granuloma/Scar Chronic Inflammation (-) Female 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Female 12/9/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 5	Female 6/19/09	75	31	1	(+)
Male 69/09 69 8.9.10.11 Periapical Granuloma Cyst Reactive bone (+) Male 5/30.09 50 8 Periapical Granuloma, Marked AC Infimmation (-) Female 5/27/09 46 15 Periapical Granuloma, Marked AC Infimmation (-) Male 5/20/09 3 Periapical Granuloma Moderate C.Inflammation (-) Female 5/13/09 64 18 Periapical Granuloma Marked AC Inflammation (-) Female 2/26/09 64 18 Periapical Granuloma with (-) (-) Female 2/26/09 60 18/19 Periapical Granuloma with (-) (-) Female 2/26/09 63 9/11 Periapical Granuloma with (-) (-) Female 2/26/09 63 9/11 Periapical Granuloma/Scar Chronic Inflammation (-) Female 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Female 12/9/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 5				Chronic Inflam.	
Male 5/30/09 69 Reactive Bone (-) Permale 5/27/09 50 8 Pertapical Granuloma, Marked AC Infimmation Reactive Bone (-) Permale 5/27/09 46 9 Pertapical Granuloma/Scar Reactive Bone (-) Male 5/20/09 55 3 Pertapical Granuloma Marked AC Infimmation (+) Female 5/13/09 64 20 Pertapical Granuloma Marked AC Infimmation (-) Female 5/13/09 64 18 Pertapical Granuloma Marked AC Infimmation (-) Female 2/12/09 63 18/19 Pertapical Granuloma with Octoancerosit (deal bone) (-) Female 2/13/09 63 9/11 Pertapical Granuloma/Scar (-) Female 12/13/08 5 Radicular Cryst Pertapical Marked AC (-) Male 12/19/08 5 Radicular Cryst Pertapical Marked AC (-) Female 10/6/08 3 Pertapical Granuloma/Cryst (-) Male 10/108 5 Pertapical Gran	Male 6/9/09		8,9,10,11		(+)
Male 5/30/09 50 8 Periapical Granuloma, Marked AC Infimumation Reactive Bone (-) Female 5/27/09 46 15 Periapical Granuloma/Scar Reactive Bone (-) Male 5/20/09 55 3 Periapical Granuloma/Scar Reactive Bone (-) Female 5/13/09 64 20 Periapical Granuloma Marked AC Inflammation (-) Female 4/10/09 18 Periapical Granuloma Wath Octaoutoma with Octaouecrosis (dead bone) (-) Female 2/26/09 60 18/19 Periapical Granuloma Wath Octaouecrosis (dead bone) (-) Female 2/13/09 63 3 Periapical Granuloma/Scar Chronic Inflammation (-) Female 12/19/08 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 5 Periapical Granuloma/Scar Chronic Inflammation (-) Female 10/1/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 63 Periapical Granuloma/Cyst (-) Female 10/1/08		69	-,-,-,-,		
Influmation Influmation Influmation Influmation Permale 5/27/09 46 Periapical Granuloma/Scar Reactive Bone (·) Male 5/20/09 55 3 Periapical Granuloma (+) Female 5/13/09 64 16 Periapical Granuloma Marked AC (·) Female 5/13/09 64 18 Periapical Granuloma Abreed AC (·) Female 2/26/09 60 18/19 Periapical Granuloma Marked AC (·) Female 2/26/09 60 18/19 Periapical Granuloma Marked AC (·) Female 2/13/08 63 1nflummation (·) (Fossanaz Person) Female 12/13/08 56 9/11 Periapical Granuloma/Scar (·) Female 12/9/08 5 Radicular Cyst Periapical Marked AC (·) (·) Male 12/9/08 5 Periapical Granuloma/Cyst (·) (·) Female 10/6/08 34 Periapical Granuloma/Cyst Chronic (+)	Male 5/20/00		0		
Female 5/27/09 46 15 Periapical Granuloma/Scar Reactive (-) Male 5/20/09 55 3 Periapical Granuloma (+) Male 5/20/09 55 3 Periapical Granuloma (+) Female 5/13/09 64 20 Periapical Granuloma Marked AC (-) Female 4/10/09 18 Periapical Granuloma with (-) (-) Female 2/26/09 60 18/19 Periapical Granuloma with (-) Female 2/13/09 63 Periapical Granuloma Marked AC (-) Female 12/13/08 9/11 Periapical Granuloma/Scar (-) Female 12/13/08 9/11 Periapical Granuloma/Scar (-) Female 12/19/08 5 Periapical Granuloma/Scar (-) Male 12/19/08 5 Periapical Granuloma/Cyst (-) Male 12/19/08 5 Periapical Granuloma/Cyst (-) Male 12/19/08 51 Pe	Male 5/30/09		ŏ		(-)
Female 5/27/09 46 15 Periapical Granuloma/Scar Reactive Bone (·) Male 5/2009 3 Periapical Granuloma Marked AC Inflammation (+) Female 5/13/09 64 20 Periapical Granuloma Marked AC Inflammation (-) Female 5/13/09 64 18 Periapical Granuloma Abscess Marked AC Inflammation (-) Female 2/26/09 60 18/19 Periapical Granuloma Marked AC Inflammation (-) Female 2/13/09 63 Periapical Granuloma Marked AC Inflammation (-) Female 2/13/08 56 9/11 Periapical Granuloma/Scar Chronic Inflammation (-) Female 12/19/08 5 Periapical Granuloma/Cyst (-) Male 12/19/08 5 Periapical Granuloma/Cyst (-) Male 12/19/08 5 Periapical Granuloma/Cyst (-) Female 10/6/08 3 Periapical Granuloma/Cyst (-) Female 10/1/08 30 Periapical Granuloma/Cyst Chronic Inflammation		50			
46 Boxe Constrained and a principal canadoma Male 5/20/09 55 3 Periapical Granuloma (+) Female 5/13/09 64 20 Periapical Granuloma Marked AC (-) Female 4/10/09 18 Periapical Granuloma-Abscess Marked (-) Female 2/26/09 60 18/19 Periapical Granuloma Vith (+) Female 2/13/09 60 3 Periapical Granuloma/Scar (-) Female 2/13/08 63 9/11 Periapical Granuloma/Scar (-) Female 12/13/08 5 Periapical Granuloma/Scar (-) Male 12/19/08 63 5 Periapical Granuloma/Cyst (-) Male 12/9/08 63 5 Periapical Granuloma/Cyst (-) Male 10/108 3 Periapical Granuloma/Cyst (-) (-) Female 10/1/08 24 3 Periapical Granuloma/Cyst (-) Male 8/11/08 24					
Male 5/20/09 55 Bone Moderate C-Inflammation Female 5/13/09 64 Periapical Granuloma Marked AC (-) Female 4/10/09 18 Periapical Granuloma-Abscess Marked (-) Female 2/26/09 64 Periapical Granuloma-Abscess Marked (-) Female 2/26/09 60 18/19 Periapical Granuloma With (+) Female 2/13/09 63 Periapical Granuloma Marked AC (-) Female 2/13/08 63 Periapical Granuloma/Scar (-) Female 12/13/08 5 Periapical Granuloma/Cyst (-) Female 12/13/08 5 Periapical Granuloma/Cyst (-) Male 12/19/08 5 Radicular Cyst Periapical Granuloma/Cyst (-) Male 12/19/08 5 Periapical Granuloma/Cyst (-) Male 10/108 3 Periapical Granuloma/Cyst (-) Female 10/108 24 Chronic inflammation (-)	Female 5/27/09		15	Periapical Granuloma/Scar Reactive	(-)
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		46		Bone	
Initial Local 55 Image: Constraint of the second s	Male 5/20/09		3	Perianical Granuloma	(+)
Female 5/13/09 - 20 Periapical Granuloma Marked AC Inflammation (-) Female 4/10/09 38 18 Periapical Granuloma-Abscess Marked AC Inflammation (-) Female 2/26/09 60 18 Periapical Granuloma with Osteonecrosis (dead bone) (+) Female 2/13/09 63 3 Periapical Granuloma Marked AC (-) Female 2/13/08 63 9/11 Periapical Granuloma/Scar (-) Chronic Inflammation 56 9/11 Periapical Granuloma/Scar (-) Female 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 3 Periapical Granuloma/Cyst Chronic (+) Female 10/6/08 3 Periapical Granuloma/Cyst Chronic (+) Female 10/1/08 5 Periapical Granuloma/Cyst Chronic (+) Female 9/13/08 29/30 Thickened partially devitalized bone (-) <		55	2		(.7
64 Inflammation Constraint Female 4/10/09 38 18 Periapical Granuloma-Abscess Marked (-) Female 2/26/09 60 18/19 Periapical Granuloma with Octeonecrosis (dead bone) (+) Female 2/13/09 60 3 Periapical Granuloma Marked AC (-) Female 12/13/08 56 9/11 Periapical Granuloma/Scar (-) Female 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Female 12/9/08 5 Periapical Granuloma/Scar (-) Male 12/9/08 5 Periapical Granuloma/Cyst Chronic (+) Male 10/6/08 34 3 Periapical Granuloma/Cyst Chronic (+) Female 9/13/08 60 29/30 Thickened partially devitalized bone (-) Male 8/11/08 29 28 Chronic inflammation/ (+) Male 8/11/08 29 Granuloma/Scar (-) (-) Female 7/14/08 <td>Eastella 5/12/00</td> <td></td> <td>20</td> <td></td> <td>()</td>	Eastella 5/12/00		20		()
Female 4/10/09 18 Periapical Granuloma-Abscess Marked AC Infimmation (-) Female 2/26/09 60 18/19 Periapical Granuloma with Osteonecrosis (dead bone) (+) Female 2/13/09 63 9/11 Periapical Granuloma Marked AC Infiammation (-) Female 12/13/08 9/11 Periapical Granuloma/Scar (-) Female 12/9/08 56 Staticular Cyst Periapical Marked AC Infiammation (-) Male 12/9/08 70 Staticular Cyst Periapical Granuloma/Cyst Marked AC Infiammation (-) Male 10/6/08 3 Periapical Granuloma/Cyst Chronic Infiammation (-) Female 10/108 30 Periapical Granuloma/Cyst Chronic Infiammation (-) Female 9/13/08 29 Chronic infiammation/Yest Chronic Infiammation (-) Male 8/11/08 29 8.9 Chronic infiammation/Yest Chronic Infiammation (-) Male 8/11/08 29 S.9 Chronic infiammation/Periapical Granuloma/Scar (-) Female 7/14/08 56 3 Acute and Chronic infiammation (-)	Female 5/15/09		20		(-)
Remain 38 AC Infimmation C Female 2/26/09 60 18/19 Periapical Granuloma with Osteonecrosis (dead bone) (+) Female 2/13/09 63 Periapical Granuloma Marked AC (-) Female 12/13/08 9/11 Periapical Granuloma Marked AC (-) Female 12/13/08 56 9/11 Periapical Granuloma/Scar (-) Female 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 63 5 Periapical Granuloma/Cyst (-) Male 12/9/08 63 5 Periapical Granuloma/Cyst (-) Female 10/6/08 3 Periapical Granuloma/Cyst (-) Female 10/1/08 3 Periapical Granuloma/Cyst (-) Female 10/1/08 3 Periapical Granuloma/Cyst (-) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 29 Chronic inflammation (-) Male 8/11/08 29 Chronic inflammation (-) Female 7/8/08 3 Acute and Chronoic inflammation (-)		64			
Female 2/26/09 60 18/19 Periapical Granuloma with Octeonecrosis (dead bone) (+) (Fossamax Person) Female 2/13/09 63 3 Periapical Granuloma Marked AC Inflammation (-) Female 12/13/08 9/11 Periapical Granuloma/Scar Chronic Inflammation (-) Female 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 63 5 Periapical Granuloma/Cyst (-) Male 12/9/08 63 5 Periapical Granuloma/Cyst (-) Female 10/6/08 3 9 Periapical Granuloma/Cyst Chronic Inflammation (+) Female 10/1/08 30 Periapical Granuloma/Cyst Chronic Inflammation/ (+) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation inflammation/ (-) Male 8/11/08 2.9 Chronic inflammation/ (+) Male 8/11/08 3 Acute and Chronic inflammation with Fibrosis and Granuloma/Scar (-) Female 7/14/08 56 19 Cystic Ameloblastom assee Fibrosis and Inflammation (-) Female 6/21/08 9 Fibrosis and Inflammation (-) Female 6/21/08 <	Female 4/10/09		18	Periapical Granuloma-Abscess Marked	(-)
Female 2/13/09 60 Osteonecrosis (dead bone) (Fossamar Person) Female 2/13/09 63 3 Periapical Granuloma Marked AC (-) Female 12/13/08 56 9/11 Periapical Granuloma/Scar (-) Female 12/9/08 56 Prinapical Granuloma/Csar (-) Male 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Male 10/6/08 34 9 (-) Female 10/6/08 34 1nflammation (-) Female 10/1/08 30 Periapical Granuloma/Cyst Chronic (+) Female 10/1/08 29/30 Thickened partially devitalized bone (-) Male 8/11/08 29/30 Thickened partially devitalized bone (-) Male 8/11/08 29 Periapical Granuloma/Cyst Chronic inflammation/ (+) Male 8/11/08 29 Chronic inflammation/ (+) Periapical Granuloma/Scar (-) (-) (-) (-) Male 8/11/08 3 Acute and Chronic inflammation with Florosis and Granuloma/ (-) Female <t< td=""><td></td><td>38</td><td></td><td>AC Infimmation</td><td></td></t<>		38		AC Infimmation	
Female 2/13/09 60 Osteonecrosis (dead bone) (Fossamar Person) Female 2/13/09 63 3 Periapical Granuloma Marked AC (-) Female 12/13/08 56 9/11 Periapical Granuloma/Scar (-) Female 12/9/08 56 Prinapical Granuloma/Csar (-) Male 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Male 10/6/08 34 9 (-) Female 10/6/08 34 1nflammation (-) Female 10/1/08 30 Periapical Granuloma/Cyst Chronic (+) Female 10/1/08 29/30 Thickened partially devitalized bone (-) Male 8/11/08 29/30 Thickened partially devitalized bone (-) Male 8/11/08 29 Periapical Granuloma/Cyst Chronic inflammation/ (+) Male 8/11/08 29 Chronic inflammation/ (+) Periapical Granuloma/Scar (-) (-) (-) (-) Male 8/11/08 3 Acute and Chronic inflammation with Florosis and Granuloma/ (-) Female <t< td=""><td>Female 2/26/09</td><td></td><td>18/19</td><td>Perianical Granuloma with</td><td>(+)</td></t<>	Female 2/26/09		18/19	Perianical Granuloma with	(+)
Female 2/13/09 63 3 Periapical Granuloma Marked AC (-) Female 12/13/08 56 9/11 Periapical Granuloma/Scar (-) Female 12/19/08 56 9/11 Periapical Granuloma/Scar (-) Female 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Female 10/6/08 3 Periapical Granuloma/Cyst Chronic (+) Female 10/6/08 34 3 Periapical Granuloma/Cyst Chronic (+) Female 10/1/08 34 3 Periapical Granuloma/Scar (-) Reactive Bone 60 29/30 Thickened partially devitalized bone (-) Male 8/11/08 28 Chronic inflammation/ (+) Male 8/11/08 29 Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation / (-) Female 7/14/08 19 Cystic Amelobalatoma (-) Female 6/18/08 9 Fibrosis and Granulation Tissue (-)	100000	60	10/15		
63 Inflammation Female 12/13/08 56 Female 12/9/08 56 70 Staticular Cyst Periapical Marked AC Male 12/9/08 5 Female 10/6/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 5 Female 10/6/08 3 Periapical Granuloma/Cyst (-) Male 10/1/08 30 Periapical Granuloma/Cyst Chronic (+) Inflammation (-) Reactive Bone (-) Male 8/11/08 29/30 Male 8/11/08 28 Chronic inflammation/ (+) Periapical Granuloma/Scar (-) Male 8/11/08 28 Soft Chronic inflammation/ (+) Periapical Granuloma/Scar (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 6/21/08 9 Female 6/21/08 4 Periapical Granuloma/Scar (+) Chronic inflammation (-) Female 6/21/08 9 Female 6/18/08 7/9		00		Ostconectosis (dead sone)	(ressure resold)
63 Inflammation Female 12/13/08 56 Female 12/9/08 56 70 Staticular Cyst Periapical Marked AC Male 12/9/08 5 Female 10/6/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 5 Female 10/6/08 3 Periapical Granuloma/Cyst (-) Male 10/1/08 30 Periapical Granuloma/Cyst Chronic (+) Inflammation (-) Reactive Bone (-) Male 8/11/08 29/30 Male 8/11/08 28 Chronic inflammation/ (+) Periapical Granuloma/Scar (-) Male 8/11/08 28 Soft Chronic inflammation/ (+) Periapical Granuloma/Scar (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 6/21/08 9 Female 6/21/08 4 Periapical Granuloma/Scar (+) Chronic inflammation (-) Female 6/21/08 9 Female 6/18/08 7/9	E1- 0/10/00			Desire in 1 Consultance 3 (asked 1 4 C	()
Female12/13/089/11Periapical Granuloma/Scar Chronic Inflammation(-)Female12/19/085Radicular Cyst Periapical Marked AC Inflammation(-)Male12/9/085Periapical Granuloma/Cyst Marked AC Inflammation(-)Female10/6/083Periapical Granuloma/Cyst Chronic Inflammation(+)Female10/1/083430Periapical Granuloma/Cyst Chronic Inflammation(-)Female10/1/0830Periapical Granuloma/Cyst Chronic Inflammation(-)Female9/13/0829/30Thickened partially devitalized bone and granulation tissue (granuloma)(-)Male8/11/0828Chronic inflammation/ Periapical Granuloma(-)Male8/11/088.9Chronic inflammation/ Periapical Granuloma(-)Female7/14/083Acute and Chronic inflammation / Pibrosis and Granulation(-)Female6019Cystic Ameloblastoma Pibrosis and Inflammation(-)Female6/21/089Fibrosis and Inflammation(-)Female6/18/087/9Periapical Granuloma/Scar Chronic inflammation(+)Female6/21/084Periapical Granuloma/Scar Chronic inflammation(-)Male4/22/089Apical Fibrosis / Scar(-)Male4/22/0859Apical Fibrosis / Scar(-)	Female 2/13/09		3		(-)
Sec Chronic Inflammation Constraint Female 12/9/08 5 Radicular Cyst Periapical Marked AC (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Female 10/6/08 3 Periapical Granuloma/Cyst Chronic (+) Female 10/1/08 30 Periapical Granuloma/Cyst Chronic (-) Female 10/1/08 30 Periapical Granuloma/Cyst Chronic (-) Female 10/1/08 30 Periapical Granuloma/Cyst Chronic (-) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 29 Chronic inflammation/ (+) Male 8/11/08 29 Chronic inflammation/ (-) Male 8/11/08 3 Acute and Chronic inflammation with Fibrosis and Granuloma/ (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 66 9 Fibrosis and Inflammation (+) Female 6/18/08 9 Fibrosis Al Granuloma/Scar (+) Female 6/18/08 49		63			
Female 12/9/08 5 Radicular Cyst Periapical Marked AC Inflammation (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Male 12/9/08 5 Periapical Granuloma/Cyst (-) Female 10/6/08 3 Periapical Granuloma/Cyst Chronic Inflammation (+) Female 10/1/08 30 Periapical Granuloma/Scar Reactive Bone (-) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 28 Chronic inflammation/ (+) Male 8/11/08 8.9 Chronic inflammation/ (-) Female 7/14/08 3 Acute and Chronic inflammation (-) Female 7/14/08 3 Acute and Chronic inflammation (-) Female 7/14/08 9 Fibrosis and Inflammation (-) Female 6/21/08 9 Fibrosis and Inflammation (-) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) (+) Female 6/20/8 4 Periapica			0/11	Periapical Granuloma/Scar	(-)
70 Inflammation Male 12/9/08 5 63 5 Female 10/6/08 34 Periapical Granuloma/Cyst Marked AC Inflammation (-) Female 10/1/08 34 Inflammation Female 10/1/08 51 30 Periapical Granuloma/Scar (-) Reactive Bone (-) 60 29/30 Male 8/11/08 29 Chronic inflammation/ Male 8/11/08 29 Chronic inflammation/ Male 8/11/08 29 Chronic inflammation/ Female 7/14/08 56 19 Cystic Ameloblastoma (-) Female 6/21/08 60 9 Fibrosis and Granulamation (+) Female 6/21/08 60 19 Cystic Ameloblastoma (-) Female 6/21/08 60 9 Fibrosis Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar Female 6/21/08 60 7/9 <td>Female 12/13/08</td> <td></td> <td>9/11</td> <td></td> <td></td>	Female 12/13/08		9/11		
70 Inflammation Male 12/9/08 5 63 5 Female 10/6/08 34 Periapical Granuloma/Cyst Marked AC Inflammation (-) Female 10/1/08 34 Inflammation Female 10/1/08 51 30 Periapical Granuloma/Scar (-) Reactive Bone (-) 60 29/30 Male 8/11/08 29 Chronic inflammation/ Male 8/11/08 29 Chronic inflammation/ Male 8/11/08 29 Chronic inflammation/ Female 7/14/08 56 19 Cystic Ameloblastoma (-) Female 6/21/08 60 9 Fibrosis and Granulamation (+) Female 6/21/08 60 19 Cystic Ameloblastoma (-) Female 6/21/08 60 9 Fibrosis Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar Female 6/21/08 60 7/9 <td>Female 12/13/08</td> <td>56</td> <td>9/11</td> <td>Chronic Inflammation</td> <td></td>	Female 12/13/08	56	9/11	Chronic Inflammation	
Male12/9/085Periapical Granuloma/Cyst Marked AC Inflammation(-)Female10/6/083Periapical Granuloma/Cyst Chronic Inflammation(+)Female10/1/0830Periapical Granuloma/Cyst Chronic Inflammation(-)Female9/13/085130Periapical Granuloma/Scar Reactive Bone(-)Female9/13/086029/30Thickened partially devitalized bone and granulation tissue (granuloma)(-)Male8/11/0828Chronic inflammation/ Granuloma/Scar(+)Male8/11/0829Chronic inflammation/ Granuloma/Scar(-)Female7/14/083Acute and Chronic inflammation with Fibrosis and Granulation Tissue(-)Female7/2/0819Cystic Ameloblastoma Fibrosis and Inflammation(-)Female6/21/089Fibrosis, Periapical Granuloma/Scar(+)Female6/21/089Fibrosis and Inflammation(-)Female6/21/089Fibrosis, Periapical Scar(+)Female6/21/084Periapical Granuloma/Scar(-)Male4/22/08559Apical Fibrosis / Scar(-)Male4/22/089Apical Fibrosis / Scar(-)		56			(-)
63 Marked AC Inflammation C Female 10/6/08 3 Periapical Granuloma/Cyst Chronic Inflammation (+) Female 10/1/08 30 Periapical Granuloma/Cyst Chronic Inflammation (-) Female 10/1/08 51 Periapical Granuloma/Scar Reactive Bone (-) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 29 28 Chronic inflammation/ Granuloma/Scar (-) Male 8/11/08 8.9 Chronic inflammation/ Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation mith Fibrosis and Granulation Tissue (-) Female 66 9 Fibrosis and Granulation Tissue (-) Female 6/21/08 9 Fibrosis, Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/21/08 4 Periapical Granuloma/Scar (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)				Radicular Cyst Periapical Marked AC	(-)
Female 10/6/08 3 Periapical Granuloma/Cyst Chronic Inflammation (+) Female 10/1/08 30 Periapical Granuloma/Scar Reactive Bone (-) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 29 Chronic inflammation/ Periapical Granuloma (-) Male 8/11/08 8.9 Chronic inflammation/ Granuloma/Scar (-) Male 8/11/08 8.9 Chronic inflammation/ Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 66 9 Fibrosis and Inflammation (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) (-) Female 6/18/08 7/9 Periapical Granuloma/Scar (-) (-) Male 4/22/08 9 Apical Fibrosis / Scar (-) (-)	Female 12/9/08		5	Radicular Cyst Periapical Marked AC Inflammation	
34 Inflammation (-) Female 10/1/08 30 Periapical Granuloma/Scar (-) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 29 Chronic inflammation/ (+) Male 8/11/08 29 Chronic inflammation/ (+) Male 8/11/08 8.9 Chronic inflammation/ (-) Male 8/11/08 8.9 Chronic inflammation/ (-) Male 8/11/08 8.9 Chronic inflammation/ (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granuloma (-) Female 7/8/08 19 Cysic Ameloblastoma (-) Female 6/18/08 9 Fibrosis and Inflammation (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Male 4/22/08 9 Apical Fibrosis / Scar (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08	70	5	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst	
34 Inflammation Female 10/1/08 30 Periapical Granuloma/Scar (-) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 29 Chronic inflammation/ (+) Male 8/11/08 29 Chronic inflammation/ (+) Male 8/11/08 8.9 Chronic inflammation/ (-) Male 8/11/08 8.9 Chronic inflammation/ (-) Female 7/14/08 3 Acute and Chronic inflammation with 56 (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 66 9 Fibrosis and Inflammation (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/12/08 4 Periapical Granuloma/Scar (+) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08	70	5	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst	
Female 10/1/08 30 Periapical Granuloma/Scar Reactive Bone (-) Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 28 Chronic inflammation/ Periapical Granuloma (+) Male 8/11/08 29 Chronic inflammation/ Periapical Granuloma (-) Male 8/11/08 8,9 Chronic inflammation/ Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cysic Ameloblastoma (-) Female 6/21/08 9 Fibrosis, Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granulom/Scar (+) Female 6/20/8 4 Periapical Granuloma/Scar (+) Female 6/20/8 9 Priapical Granuloma/Scar (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08	70	5	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation	(-)
51 Reactive Bone Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 28 Chronic inflammation/ Periapical Granuloma (+) Male 8/11/08 29 Chronic inflammation/ Periapical Granuloma (-) Male 8/11/08 29 Chronic inflammation/ Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cysic Ameloblastoma Fibrosis and Inflammation (-) Female 6/21/08 9 Fibrosis, Periapical Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/208 4 Periapical Granuloma/Scar (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08	70 63	5	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic	(-)
Female 9/13/08 29/30 Thickened partially devitalized bone and granulation tissue (granuloma) (-) Male 8/11/08 28 Chronic inflammation/ Periapical Granuloma (+) Male 8/11/08 8.9 Chronic inflammation/ Periapical Granuloma (-) Male 8/11/08 8.9 Chronic inflammation/ Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 6/21/08 9 Fibrosis, Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08	70 63	5	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation	(-)
60 and granulation tissue (granuloma) Male 8/11/08 28 Chronic inflammation/ Periapical Granuloma (+) Male 8/11/08 8.9 Chronic inflammation/ Periapical Granuloma (-) Male 8/11/08 8.9 Chronic inflammation/ Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 66 9 Fibrosis and Inflammation (+) Female 6/18/08 9 Fibrosis, Periapical Granuloma/Scar (+) Female 6/18/08 49 7/9 Periapical Granuloma/Scar (-) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08	70 63 34	5	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation	(-)
Male 8/11/08 28 Chronic inflammation/ Periapical Granuloma (+) Male 8/11/08 8,9 Chronic inflammation/ Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 66 9 Fibrosis and Inflammation (-) Female 6/21/08 9 Fibrosis, Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08	70 63 34	5 5 3 30	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone	(-) (+) (-)
29 Periapical Granuloma Male 8/11/08 8,9 Chronic inflammation/ Periapical Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 66 9 Fibrosis and Inflammation (+) Female 66 7/9 Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08	70 63 34 51	5 5 3 30	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone	(-) (+) (-)
29 Periapical Granuloma Male 8/11/08 8,9 Chronic inflammation/ Periapical Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cystic Ameloblastoma (-) Female 66 9 Fibrosis and Inflammation (+) Female 66 7/9 Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08	70 63 34 51	5 5 3 30 29/30	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma)	(-) (+) (-) (-)
Male 8/11/08 8,9 Chronic inflammation/ Periapical Granuloma/Scar (-) Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cystic Ameloblastoma Fibrosis, Periapical Scar (-) Female 6/21/08 9 Fibrosis, Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08	70 63 34 51	5 5 3 30 29/30	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma)	(-) (+) (-) (-)
29 Granuloma/Sear Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue Female 7/8/08 19 Cysic Ameloblastoma Fibrosis and Inflammation (-) Female 6/21/08 9 Fibrosis, Periapical Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08	70 63 34 51 60	5 5 3 30 29/30	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/	(-) (+) (-) (-)
Female 7/14/08 3 Acute and Chronic inflammation with Fibrosis and Granulation Tissue (-) Female 7/8/08 19 Cystic Ameloblastoma Fibrosis and Inflammation (-) Female 6/21/08 9 Fibrosis, Periapical Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08	70 63 34 51 60	5 5 3 30 29/30 28	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma	(-) (+) (-) (-) (+)
56 Fibrosis and Granulation Tissue Female 7/8/08 19 Cystic Ameloblastoma (-) 54 Fibrosis and Inflammation Fibrosis and Inflammation (+) Female 6/2/08 9 Fibrosis, Periapical Granuloma/Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08	70 63 34 51 60 29	5 5 3 30 29/30 28	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical	(-) (+) (-) (-) (+)
Female 7/8/08 19 Cystic Ameloblastoma Fibrosis and Inflammation (-) Female 6/21/08 9 Fibrosis, Periapical Scar (+) Female 6/18/08 9 Periapical Granuloma/Scar (+) Female 6/18/08 49 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08	70 63 34 51 60 29 29	5 5 3 30 29/30 28 8,9	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma	(-) (+) (-) (-) (+) (-)
54 Fibrosis and Inflammation Female 6/21/08 9 Fibrosis, Periapical Scar (+) 66 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 49 Chronic inflammation (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08	70 63 34 51 60 29 29	5 5 3 30 29/30 28 8,9	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/Periapical Granuloma/Scar Acute and Chronic inflammation with	(-) (+) (-) (-) (+) (-)
Female 6/21/08 9 Fibrosis, Periapical Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 49 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08	70 63 34 51 60 29 29	5 5 3 30 29/30 28 8,9 3	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation Periapical Granuloma Chronic inflammation	(-) (+) (-) (-) (+) (-) (-)
Female 6/21/08 9 Fibrosis, Periapical Scar (+) Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 49 Chronic inflammation (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08	70 63 34 51 60 29 29	5 5 3 30 29/30 28 8,9 3	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation Chronic inflammation Reactive and Chronic	(-) (+) (-) (-) (+) (-) (-)
66 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08	70 63 34 51 60 29 29 29 56	5 5 3 30 29/30 28 8,9 3	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation Chronic inflammation Reactive and Chronic	(-) (+) (-) (-) (+) (-) (-)
Female 6/18/08 7/9 Periapical Granuloma/Scar (+) Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/8/08	70 63 34 51 60 29 29 29 56 54	5 5 3 30 29/30 28 8,9 3 19	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Pibrosis and Granuloma	(-) (+) (-) (-) (+) (-) (-) (-)
49 Chronic inflammation Female 6/2/08 4 55 9 Male 4/22/08 58 9	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/8/08	70 63 34 51 60 29 29 29 56 54	5 5 3 30 29/30 28 8,9 3 19	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Pibrosis and Granuloma	(-) (+) (-) (+) (-) (-) (-)
Female 6/2/08 4 Periapical Granuloma (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/8/08 Female 6/21/08	70 63 34 51 60 29 29 29 29 56 54 66	5 5 3 30 29/30 28 8,9 3 19 9	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Fibrosis and Granulation Tissue Cystic Ameloblastoma Fibrosis and Inflammation Fibrosis, Periapical Scar	(-) (+) (-) (-) (+) (-) (-) (-) (-) (+)
55 9 Apical Fibrosis / Scar (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/8/08 Female 6/21/08	70 63 34 51 60 29 29 29 56 54 66	5 5 3 30 29/30 28 8,9 3 19 9	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granulation Tissue Cystic Ameloblastoma Fibrosis and Inflammation Fibrosis, Periapical Scar Periapical Granuloma/Scar	(-) (+) (-) (-) (+) (-) (-) (-) (-) (-) (+)
55 9 Apical Fibrosis / Scar (-) Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/14/08 Female 6/21/08 Female 6/18/08	70 63 34 51 60 29 29 29 56 54 66	5 5 3 30 29/30 28 8,9 3 19 9 7/9	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granulation Tissue Cystic Ameloblastoma Fibrosis and Inflammation Fibrosis, Periapical Scar Periapical Granuloma/Scar Periapical Granuloma/Scar	(-) (+) (-) (-) (+) (-) (-) (+) (+)
Male 4/22/08 9 Apical Fibrosis / Scar (-)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/14/08 Female 7/8/08 Female 6/21/08 Female 6/18/08	70 63 34 51 60 29 29 29 56 54 66	5 5 3 30 29/30 28 8,9 3 19 9 7/9	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granulation Tissue Cystic Ameloblastoma Fibrosis and Inflammation Fibrosis, Periapical Scar Periapical Granuloma/Scar Periapical Granuloma/Scar	(-) (+) (-) (-) (+) (-) (-) (+) (+)
58	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/14/08 Female 7/8/08 Female 6/21/08 Female 6/18/08	70 63 34 51 60 29 29 29 56 54 66 49	5 5 3 30 29/30 28 8,9 3 19 9 7/9	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granulation Tissue Cystic Ameloblastoma Fibrosis and Inflammation Fibrosis, Periapical Scar Periapical Granuloma/Scar Periapical Granuloma/Scar	(-) (+) (-) (-) (+) (-) (-) (-) (+) (+)
	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/2/08 Female 6/21/08 Female 6/18/08 Female 6/2/08	70 63 34 51 60 29 29 29 56 54 66 49	5 5 3 30 29/30 28 8,9 3 19 9 7/9 4	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Fibrosis and Granulation Tissue Cystic Ameloblastoma Fibrosis, Periapical Scar Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma	(-) (+) (-) (+) (-) (-) (-) (-) (+) (+) (+) (-)
remare 5/19/00 8,0 Penapical granuloma/cyst (+)	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/2/08 Female 6/21/08 Female 6/18/08 Female 6/2/08	70 63 34 51 60 29 29 29 29 29 56 54 66 49 55	5 5 3 30 29/30 28 8,9 3 19 9 7/9 4	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Fibrosis and Granulation Tissue Cystic Ameloblastoma Fibrosis, Periapical Scar Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma	(-) (+) (-) (+) (-) (-) (-) (-) (+) (+) (+) (-)
	Female 12/9/08 Male 12/9/08 Female 10/6/08 Female 10/1/08 Female 9/13/08 Male 8/11/08 Male 8/11/08 Male 8/11/08 Female 7/14/08 Female 7/8/08 Female 6/21/08 Female 6/18/08 Female 6/2/08 Male 4/22/08	70 63 34 51 60 29 29 29 29 29 56 54 66 49 55	5 5 3 30 29/30 28 8,9 3 19 9 7/9 4 9	Radicular Cyst Periapical Marked AC Inflammation Periapical Granuloma/Cyst Marked AC Inflammation Periapical Granuloma/Cyst Chronic Inflammation Periapical Granuloma/Scar Reactive Bone Thickened partially devitalized bone and granulation tissue (granuloma) Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation/ Periapical Granuloma Chronic inflammation Veriapical Granuloma/Scar Acute and Chronic inflammation with Fibrosis and Granulation Tissue Cystic Ameloblastoma Fibrosis, Periapical Scar Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma/Scar Chronic inflammation Periapical Granuloma Apical Fibrosis / Scar	(-) (+) (-) (-) (+) (-) (-) (-) (-) (+) (+) (+) (-) (-)

		63		marked chronic inflammation	
Female	1/22/08	63	14	Periapical Scar (Fibrosis) with focal bacteria	(+)
Female	1/9/08	50	19	Periapicl Granuloma/Cyst, acute/chronic inflammation	(-)
Male	12/5/07	45	5	Granulation tissue/Cyst, chronic inflammation	(-)
Female	12/1/07	34	8/9	Granualtion tissue, marked inflammation, fibrosis	(-)
Female	12/1/07	56	12/13	Granulation tissue, partially devitalized bone, chronic inflammation	(+)
Female	11/9/07	68	13	Periapical Scar/Granuloma with chronic inflammation	(+)
Female	11/1/07	70	28/29	Fragments of reactive focally necrotic bone, fibrosis, chronic inflammation	(-)
Male	12/5/07	53	31	Periapical Granuloma/Cyst marked acute/chronic inflammation	(-)
Male	9/27/07	64	14	Radicular Cyst (Periapical) marked acute / chronic inflammation	(+)
Male	9/18/07	64	19	Periapical Abscess/Granuloma	(+)
Male	8/24/07	42	2	Periapical Granuloma/ Cyst chronic inflammation and reactive bone changes	(-)
Male	8/13/07	74	19	Periapical Granuloma marked acute chronic inflammation	(+)
Male	8/13/07	74	2	Periapical Granuloma marked acute chronic inflammation	(-)
Male	8/13/07	74	30	Periapical Granuloma marked acute chronic inflammation	(-)
Female	5/23/07	51	4	Periapical Granuloma/Cyst marked acute/chronic inflammation	(+)
Male	5/12/07	62	18	Periapical Granuloma marked acute/chronic inflammation	(-)
Female	5/16/07	62	Titan Implant 6	Peri-implantitis, Granulation and Fibrosis, Chronic inflammation, Reactive Bone	(+)
Female	4/10/07	32	14	Periapical Granuloma/Scar, chronic inflammation	(+)
Female	3/31/07	59	2	Periapicl Granuloma, marked acute/chronic inflammation	(+)
Female	2/1/07	49	29	Periapical Granuloma, marked acute/chronic inflammaton	(+)
Female	7/3/06	59	Titan Imp #8	Granulation tissue, fibrosis, Chronic inflammation	(-)
Female	5/19/06	62	4	Periapical Granuloma/Chronic infalm	(+)
	5/15/06	30	9&10	Periapical Abscess/Granuloma	(+)
	4/11/06	52	24	Apical Periodontitis/ Granulation Tissue with Chronic Inflammation.	(-)
Male	4/1/06	57	31	Periapical Granuloma/Scar-Reactive Bone Changes, Chronic Inflammation.	(-)
Female	2/28/06	42	31,32	Periapical Granuloma & Cyst— Reactive Bone Changes—Marked Acute/Chronic Inflamm.	(-)
Female	2/23/06	42	18,20	Periapical Granuloma/Scar Marked Chronic/Acute Inflamm— Reactive Bone Changes.	(-)
Female	2/15/06	42	15	Periapical Granuloma/ Scar-Reactive Bone Changes	(-)
	1/26/06	42	2	Periapical Granuloma with Chronic Inflamm. And Reactive Bone Changes.	(-)
Male	1/25/06	60	19	Periapical Abscess/ Granuloma & Reactive Bone Changes	(+)Actinomyc e s
Female	12/19/05	88	24,25	Granulation Tissue/ Fibrosis with acute/chronic inflamm.	(+)Actinomyces

				1	
Female 12	2/15/05	45	12	Radicular Cyst (Periapical)	(-)
Male 11	1/8/05	83	19	Periapical Scar	(+)Actinomyces
Female 1	0/11/05	57	5	Periapical Granuloma/Cyst	(-)
Female 1	0/10/05	62	9.10	Periapical Granuloma/Cyst	(-)
Female 8		71	Titan Implant 11,12	Peri-mplant mucositis, chronic acute	6
Pennare e	2010		Than implant 11,12	inflammation, inflamed granulation tissue(granuloma) Reactive Bone Changes	(-)
Female 7	/31/05	54	15	Periapical Granuloma Reactive Bone changes	(-)
Female 7/2	26/05	64	10	Periapical Granuloma/Cyst	(-)
Female 7	/24/05	62	19	Periapical Granuloma/Cyst	(-)
Male 7	/16/05	81	5	Granuloma/Scar	(+)Actinomyces
Female 7	/06/05	52	9,10	Periapical Granuloma/Cyst Reactive bone	(-)
Male 6	/27/05	74	Titan Implant 17, 18	Peri-implantitis, Chronic inflammation,	(-)
				Granulation tissue Reactive Bone	
Female 6	/16/05		4.5.3	Fibrosis & Chronic Inflammtion	(-)
remare 0		57	4,0,0	Lesses of outside Infamilieron	(7)
Male 5/	/18/05	67	4	Periapical Granuloma/Cyst	(-)
	/10/05	73	19	Fibro-Granuloma	(+)Actinomyces
	/4/05	73	29	Periapical Granuloma Fibrosis.	(+)Actionmyces
				Chronic Inflammation	.,
	/4/05	74	Titan Implant 30, 31	Peri-implantitis, Chronic inflammation and fibrosis, hyperostotic bone	(+)Actionmyces
Male 3/	/21/05	54	Titan Implant 20	Peri-implantitis, Chronic acute inflammation Reactive Bone	(+)Actionmyces
	/16/05	56	4	Periapical Granuloma	(-)
Female 2	/15/05	41	3	Radicular Cyst	(+)Actinomyces
Female 2	/12/05	61	8,10	Periapical Granulomas	(+)Actinomyces
Male 2/	/07/05	56	6	Periapical Granuloma	(-)
Female 1	/26/05	69	4	Periapical Granuloma	(+)Actinomyces
Female 1	/24/05		14	Periapical Granuloma	
		42			(+)Actinomyces
Female 1	/20/05	56	18	Radicular Cyst	(+)Actinomyces
Male 11	1/27/04	54	9	Chronic Inflammation, Fibrosis, Granulation tissue (granuloma)	(-)
Male 11	1/20/04	56	5	Apical Periodontitis	(-)
Female 3	8/31/04	51	9	Periapical Granuloma	(+)Actinomyces
Female 3	8/16/04	54	3	Periapical Granuloma	(-)
Female 3		54	30	Periapical Granuloma	(-)
Female 3		48	19	Periapical Abscess	(+)Actinomyces
Male 7/	/22/04	45	3	Radicular Cyst Reactive bone	(+)Actinomyces
Female 7	/17/04	19	19	Periapical Granuloma	(-)
Female 7		55	30	Periapical Granuloma	(-)
	/03/04	50	10	Periapical Scar/Fibroma	(-)
Male 5/		65	7	Racicular Cyst reactive bone	
Male 5/ Female 4/	/12/04	05	-		(+)Actinomyces
		61	30	Apical Periodontitis reactive bone	(+)Actinomyces
Female 4. Female 1.				Apical Periodontitis reactive bone Periapical Granuloma	(+)Actinomyces (+)Actinomyces (-)

Female	10/18/03	53	20	Periapical Granuloma/Scar	(-) Biocalex Filled Endo
Female	9/30/03	62	13	Periapical Granuloma/Cyst	(-)
Female	9/19/03	39	14	Aperapical Granuloma Periapical periodontitis	(-)
Female	8/18/03	69	9	Periapical Granuloma	(-)
			9	•	
Male	7/30/03	44	-	Periapical Granuloma	(-)
Female	7/11/03	42	7,8,9,10	Periapical Granulomas	(+)Actinomyces
Male	6/06/03	38	25	Periapical Granuloma (Chron. Api. Periodon.)	(-)
Female	6/06/03	66	18	Radicular(Periapical) Cyst	(+)Actinomyces
Male	6/04/03	75	7	Devitalized Bone and Fibrosis	(-)
	4/01/03	61	20	Apical Fibrosis	(+)Actiinomyces
Female	3/18/03	37	20	Periapical Granuloma/Cyst	(+)Actinomyces
Male	3/17/03	66	9	Periapical Granuloma scar	
Dennela	2/18/03	61	4	Periapical Granuloma	(+)Actinomyces
			-	· · · · · · · · · · · · · · · · · · ·	(+)Actinomyces
Female	2/04/03	80	9	Radicular (Periapical) Cyst	(+)Actinomyces
Male	9/11/02	50	18	Radicular (Periapical) Cyst	(-)
Female	8/08/02	73	19	Periapical Abscess/Cyst	(-)
	6/22/02	69	28, 29, 30	Periapical Granulomas	6
	6/17/02	53	28	Periapical Granuloma with Foreign body mat.	(-)
Male	6/15/02	75	13,15	Radicular (Periapical) Cyst	(+) Actinomyc e s
Dennela	6/04/02	73	11	Device i and Commission (Cont	
				Periapical Granuloma/Cyst	(-)
	6/04/02	75	19	Periapical Granuloma/Scar	(-)
Female	5/22/02	65	20	Periapical Granuloma/Cyst (RBC)	(-)
Female	5/07/02	54	15	Radicular (Periapical) Cyst	(+) Actinomyces
Male	5/06/02	43	14,30	Periapical Granulomas (Devitalized – Dead – Bone)	(+) Actinomyces
Female	2/02/02	55	18	Periapical Granuloma	(-)
	12/03/01	61	2	Fibrosis, Granulation and Chronic Inflamm.	(-)
Male	10/30/01	43	2	Radicular Cyst and Necrotic Bone	(-)
	9/29/01	55	Titan Imp #30 #31	Periapical Granuloma, Dead Bone,	(-)
Male	9/04/01	62	18	Chronic inflammation Periapical Granuloma (RBChanges)	(+)
					Actinomyces
Female	8/31/01	54	14	Periapical Granuloma & Dead Bone	(-)
	8/27/01	51	3	Periapical Granuloma & RBChanges	(+) Actinomyces
Male	8/2//01				(+)
	8/01/01	31	10	Periapical Granuloma/Cyst	
		31 58	10 18	Periapical Abscess/Granuloma	Actinomyces (-)
Female	8/01/01			Periapical Abscess/Granuloma (RBChanges) Periapical Granuloma/Cyst with	Actinomyces (-)
Female Male	8/01/01 7/30/01	58	18	Periapical Abscess/Granuloma (RBChanges) Periapical Granuloma/Cyst with Necrotic Bone Periapical Granuloma and Devitalized	Actinomyces
Female Male Female Female	8/01/01 7/30/01 6/27/01 5/16/01	58 58 46	18 7,9 9	Periapical Abscess/Granuloma (RBChanges) Periapical Granuloma/Cyst with Necrotic Bone Periapical Granuloma and Devitalized (Dead) Bone	Actinomyces (-) (+) Actinomyces (+) Actinomyces
Female Male Female	8/01/01 7/30/01 6/27/01 5/16/01 4/30/01	58 58	18 7,9	Periapical Abscess/Granuloma (RBChanges) Periapical Granuloma/Cyst with Necrotic Bone Periapical Granuloma and Devitalized (Dead) Bone Periapical Granuloma/Cyst Periapical Granuloma with Reactive	Actinomyces (-) (+) Actinomyces (+) Actinomyces
Female Male Female Female Male Female	8/01/01 7/30/01 6/27/01 5/16/01 4/30/01	58 58 46 51 31	18 7.9 9 4	Periapical Abscess/Granuloma (RBChanges) Periapical Granuloma/Cyst with Necrotic Bone Periapical Granuloma and Devitalized (Dead) Bone Periapical Granuloma/Cyst	Actinomyces (-) (+) Actinomyces (+) Actinomyces (+) Actinomyces
Female Male Female Female Female Female	8/01/01 7/30/01 6/27/01 5/16/01 4/30/01 4/19/01	58 58 46 51	18 7,9 9 4 14	Periapical Abscess/Granuloma (RBChanges) Periapical Granuloma/Cyst with Necrotic Bone Periapical Granuloma and Devitalized (Dead) Bone Periapical Granuloma/Cyst Periapical Granuloma with Reactive Bone changes.	Actinomyces (-) (+) Actinomyces (+) Actinomyces (+) Actinomyces (-)

Female 3/12/01	50	10	Derivational Granulours (Cross	(1) Antinemers
Female 3/12/01	53	13	Periapical Granuloma/Cyst	(+) Actinomyces
Female 3/10/01	78	4	Periapical Granuloma Cyst Chronic inflammation Devital (Dead) Bone	(+) Actinomyces
Female 3/10/01	78	Titanium Post #3	Peri-implantitis Osteitis, Chronic Inflammation granulation tissue/fibrosis Devital (Dead) Bone	(+) Actinomyces
Female 2/26/01	53	4	Periapical Abscess/Granuloma	(+)Actinomyces
Female 2/26/01	50	29	Necrotic Bone Inflam . Granulation tissue/fibrosis	(-)
Female 2/17/01	50	3,4	Periapical Granuloma/Cyst	(+) Actinomyces
Female 6/8/99	22	Titanium Implant #7	Peri-implantitis, Chronic inflammation, Reactive epithelial changes parakaratosis and acanthosis reactive bone	(-)
Female 4/7/99	53	10	Periapical Granuloma/Scar with chronic inflammation	(-)
Female 3/1/99	33	14	Periapical Abscess & Granuloma marked acute/chronic inflammation with fibrosis	(-)
Male 3/6/96	37	19	Chronic Osteomyelitis with focal Osteonecrosis	(-)
Male 5/30/95	56	7,8,9,10	Marked chronic acute inflammation, Reactive bone	(-)
Female 5/23/95	35	8	Periapical Abscess & Granuloma marked inflammation	(-)
Male 4/29/89	31	8	Chronic Periodonal abscess Chronic inflammation and Fibrosis	(-)
Male 10/8/87	40	9	Periapical granuloma/ Chronic inflam cells infil	(-)
Female 8/1/87	32	19	Chronic Periapical Abs. Chronic Osteomyelitis	(-)
Male 5/2/87	37	24	Periodontal fibrosis, Chronic Osteomyelitis	(-)
Male 1/31/87	42	4	Periapical granuloma, Chronic osteitis	(-)
Female 12/3/86	?	14	Chronic Osteitis, dental Fibroma	(-)
Gender	Age	Tooth	Pathology	Bacteria

Conclusion

It is commonplace in this year 2017 to read in our dental journals and hear our media extoll the modern advancements of dental implants as being the natural replacement for the failed root canal tooth. It seems that we go from the frying pan to the fire in this regard.

As our two tables reveal the microbiologic factor from both are the presence of actinomyces; and, the mirco-currents from dental metals in these oral tissues that may not only play a significant role in failures of implants and root canals but may migrate to other parts of the human biome and play their mischief.

We as biological dental practitioners caution the misuse of these two methods, root canals or dental implants, for treatment particularly in our youth and seniors who may have compromised immunity. As Charalampakis notes in his presentation referenced at the start of our inquiry:

"It is common knowledge that mircroorganisims are a risk factor for peri-implantitis since disease is bacterially induced... Unfortunately the bacterial role is disease pathogenesis has been underrated because no specific bacteria have been implicated in the apical migration of the 'barrier' epithelium, equivalent to the junctional epithelium around teeth."

We might now humbly suggest that there may be a specific bacterium present and is prevalent in the oral environment with significant virulence whose primary function in nature is the reclamation of dead and dying matter, including the human biome. Due to the microbiological difficulty of showing actinomyces odontolyticus or any of its family members in peri-implant tissue through testing methods in the lab, we may have a subclinical factor revealed by

International Journal of Dentistry and Oral Health

this clinical research as presented. We have shown that in over 50% of the implants removed and histologically inspected that colonies of actinomyces were present associated with the pathological picture. One may not conclude that actinomyces alone is a causative agent but that, perhaps, they are one of the elements to be investigated more comprehensively.

The second equally unknown factor not looked at much at all is the implication of electrical currents in tissue surrounding metal dental implants, their corrosion products/toxins. Given the fact that body cells operate on pico-amps in normal states and that the currents generated by metal implants are in the micro-amps range, about three fold higher, this fact may give pause to our understanding of cellular destruction due to corrosion (acid base balance) and the need for immune cell phagocytosis and bacterial phagocytosis in the deep surrounding tissues of implants. **Dr. RS Carlson** graduated from the University of Michigan School of Dentistry in 1969 and completed Post Graduate training in pediatric dentistry with Strong-Carter Dental Clinic, Honolulu, Hawaii, 1970—71. He is a founder of Kokua Kalihi Valley Dental Clinic in 1973 (http://www.kkv.net/index.php/history) and volunteered from 1973 to 1980 serving low-income families and immigrant populations from the South Pacific Islands and Asia. He has maintained a private practice in Honolulu since 1971 emphasizing Bio- Logical Dentistry. He can be reached at (808) 735-0282, ddscarlson@hawaiiantel.net or carlsonbiologicaldentistry.com. Disclosure: Dr. Carlson is the inventor of the Carlson Bridge® "Winged Pontic" tooth replacement system, a noninvasive approach to replacing missing teeth, with patents issued in November 1999 and October 2001.