

## A Specialist's Perspective on CBCT 3D Imaging, Computer-Guided Implant Dentistry and Referral Relationships

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## Why I invested in CBCT - 2008

- Implants
- NobleGuide/ SimPlant ("bigger" "complex")
- Sent out about 8 - 10 scans/ month
- Out-of-town patients/ lost consults
- 12 x \$250 = \$3000



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## Why I Bought GALILEOS

- Best image quality @ lowest radiation dose
- Support
- One company (Sirona/SICAT)

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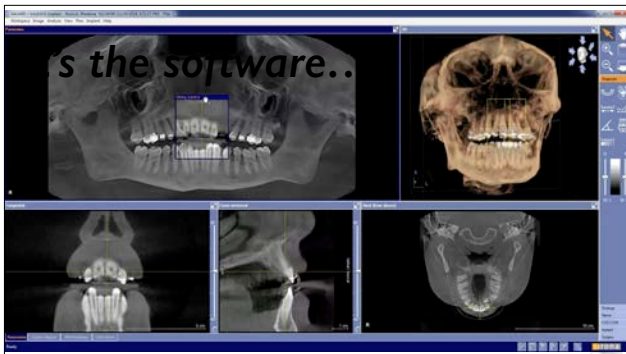
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## GALILEOS in my Practice

- Patient consultation
- Patient education
- Case acceptance
- Referral communication
- Optimal patient care



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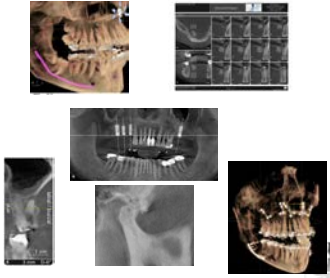
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# GALILEOS

- Pathology
- TMJ
- Orthognathic Surgery
- Perio/ Endo lesions
- Impacted Teeth
- Implants



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# Pathology

Lisa  
Healthy 50 y.o. female  
Pain, swelling left maxilla x 1 wk



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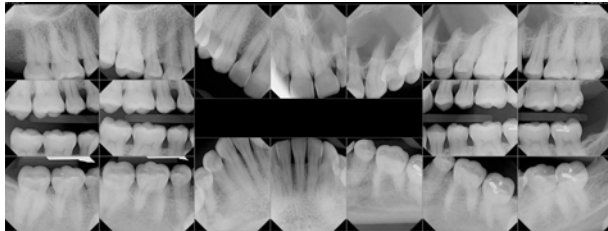
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# My job as a Specialist

- Evaluate the pathology
- Determine treatment options
- Calm patient's anxieties, fears, answer questions



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To do that...

We need accurate information

We need to be able to educate and inform the patient



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GALILEOS  
enables me to  
do those  
things



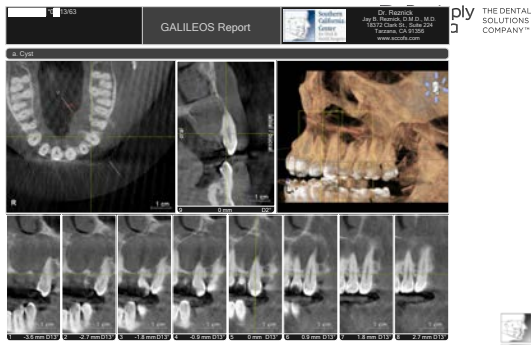
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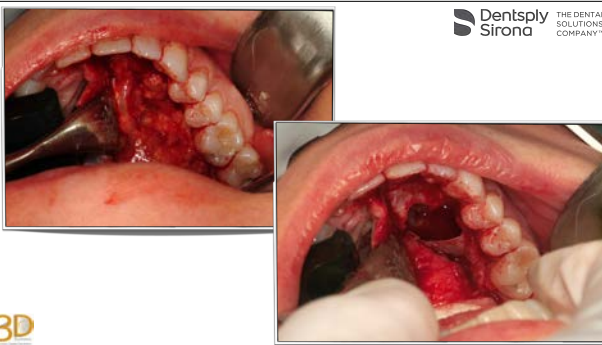
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Microscopic Diagnosis

Dentigerous Cyst

No further treatment needed



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# GALILEOS

Can lead to a more accurate diagnosis

Prevent a delay in appropriate treatment



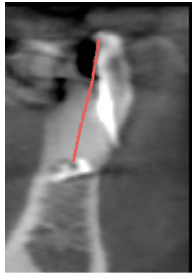
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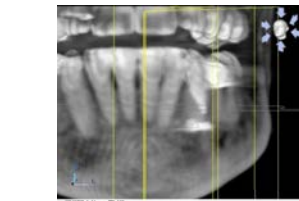
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GALILEOS 1.1.2 ... FIG 1.0



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GALILEOS 1.1.2 ...



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## How GALILEOS changes the game..

- Undiagnosed therapeutic misadventure
- Pain for over 1 year
- Apical surgery - not appropriate
- Delay in correct diagnosis/ treatment



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## Patient Consultation- 3rds

Proximity to sinus, mandibular nerve

Abnormal orientation/ position

Reduces patients' fear of surgery (esp. paresthesia risk)

2nd/3rd Opinions



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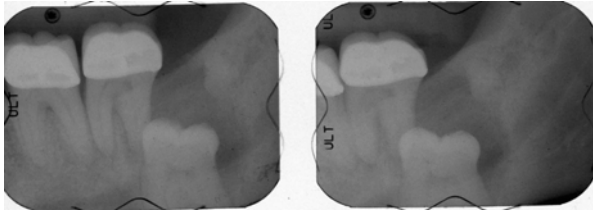
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Margaret



3D



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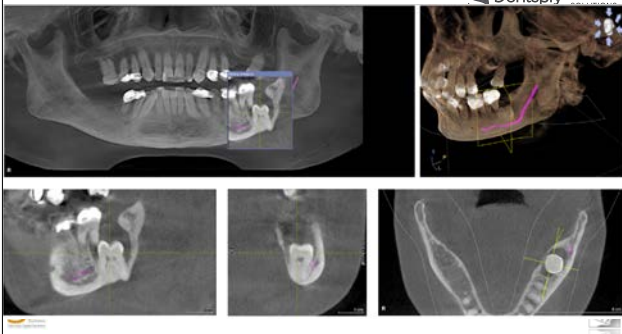
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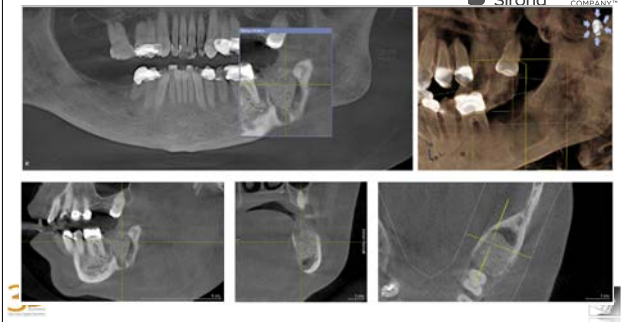
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16 Year Old Male- 3rd Consult



3D



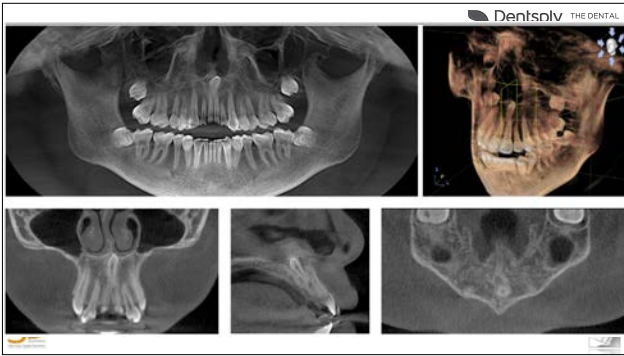
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**Sarah**  
Healthy 23 year old woman  
Referred by GP for 3rd molars  
Chronic left sinus congestion



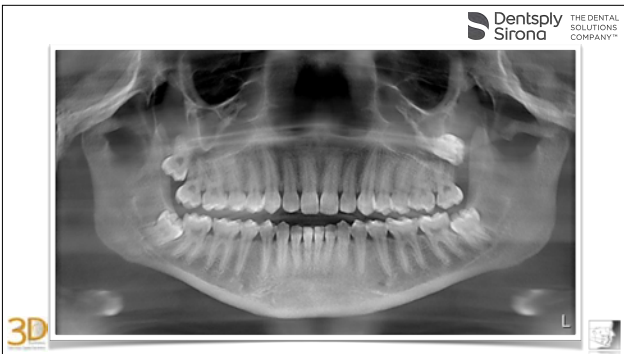
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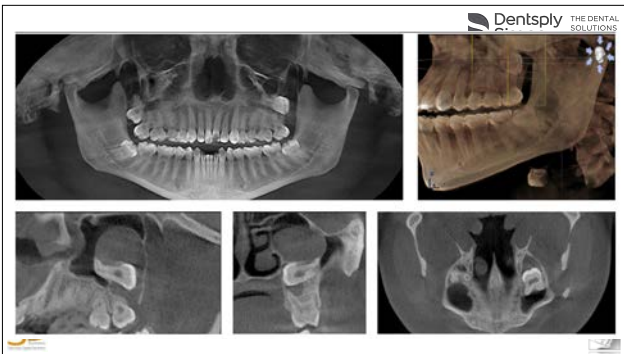
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**CBCT-Guided  
Implantology**



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## How I was trained to do implants

Panoramic-based planning

Study models (maybe)

Model based surgical guides (maybe)



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## Issues with "traditional" Implant Surgery

Implant placed where there was bone

Restoration was often an afterthought

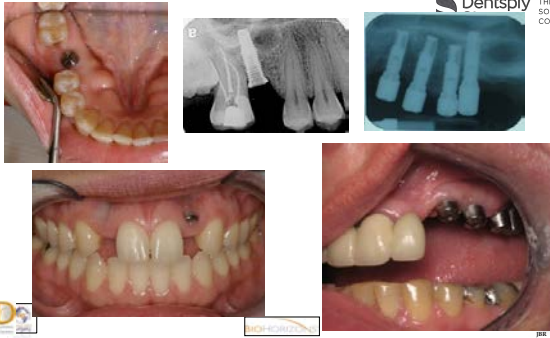


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## Why don't you do guided surgery?

"I've been doing implants for over 20 years"

"I'm good at it!"

"Why should I learn a new way of doing implant surgery?"



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## Model-Based Surgical Guide

Using a CBCT for planning and a model-based surgical guide is not a guarantee of success.



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Here's a great example...

49 year old man

Healthy

Perio- #12, 13, 14

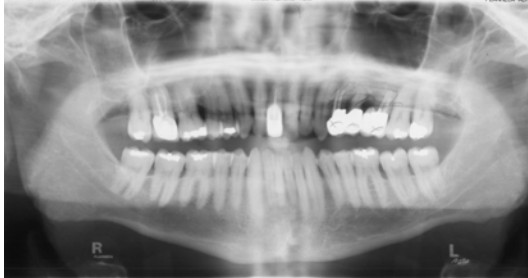


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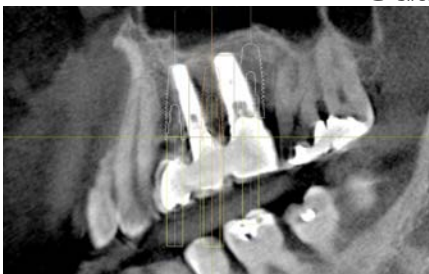


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How "good" are we?

Overall: 10 - 15%

Anterior esthetic zone: 20%

**We can do better!!**



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Why do we place implants?

**TO REPLACE MISSING TEETH!**



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Implantology Concepts

Surgically-Driven  
Implant Placement



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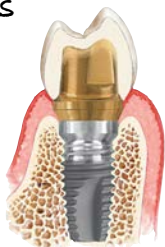
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Implantology Concepts

**Prosthetically-Driven  
Implant Placement**



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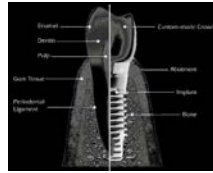
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# "Prosthetically-Driven"

Start with the ideal prosthetic restoration  
Work backwards from there




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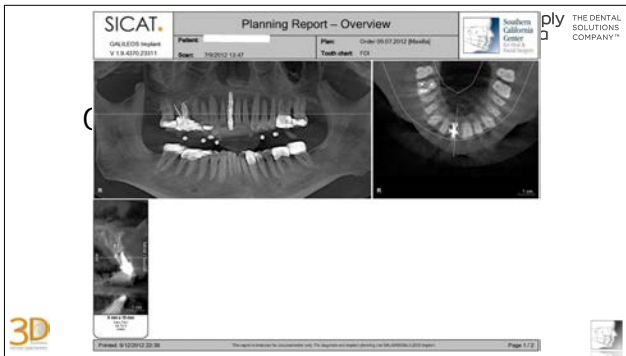
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# Immediate Provisional




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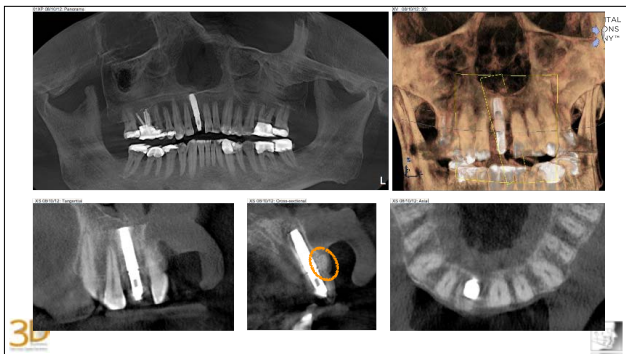
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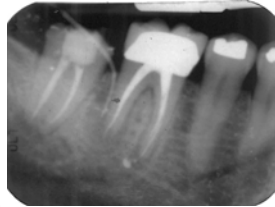
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### GALILEOS enhances referral relationships...

62 y.o. man  
NIDDM, HTN  
#30- pain  
Previous RCT (3y)  
Endodontist--> fracture  
Extract, ridge preservation



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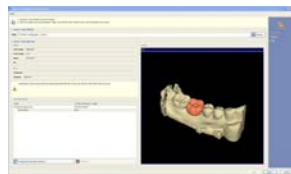
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### CEREC-GALILEOS Integration

Great opportunity for GP-Specialist interaction



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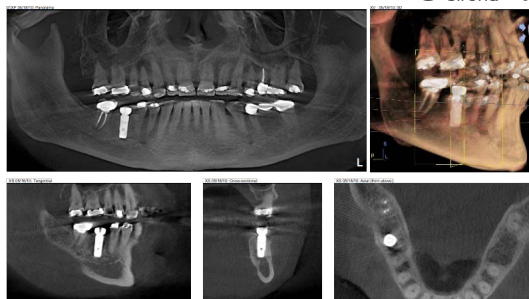
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### L.M. - Final Restoration



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J.B.

Failing #15 --> loss of bridge  
Atrophic posterior mandible



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J.B.



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This block contains a screenshot of the SICAT Planning Report - Overview. It features a grid of images including 3D radiographic views of the dental work, a 3D model of the teeth, and a 3D model of the mandible. The report includes patient information and a table of tooth status.



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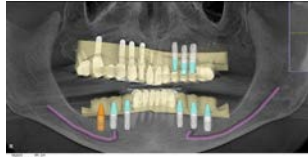
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J.B.

Extract #15, RPG

Maxillary L Ridge Split;  
Implants @ 12, 13, 14

Mandibular Implants @  
19, 20, 21, 28, 29, 30;  
FDBG



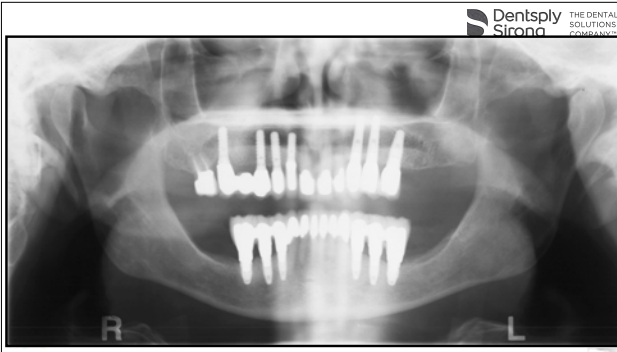
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GALILEOS- Helps  
educate patients to make  
better treatment choices



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Kathy B.

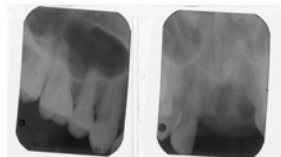
45 y.o. female

Healthy

Smoker

MVA 2005

Lost #9 --> Implant



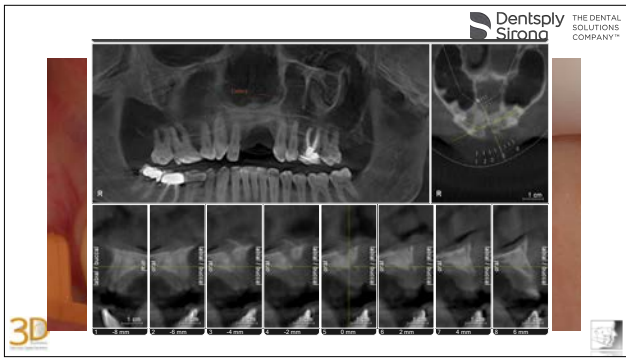
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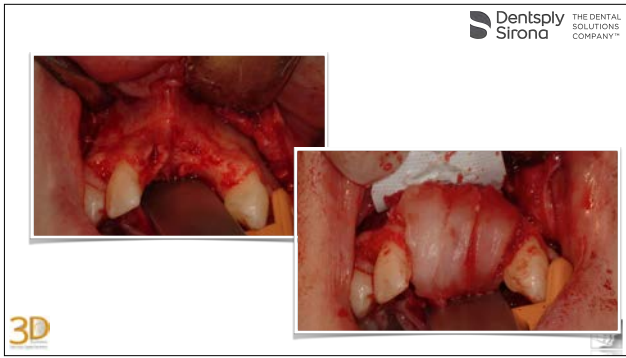
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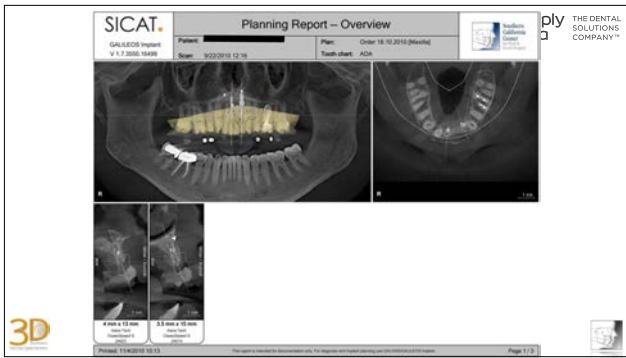
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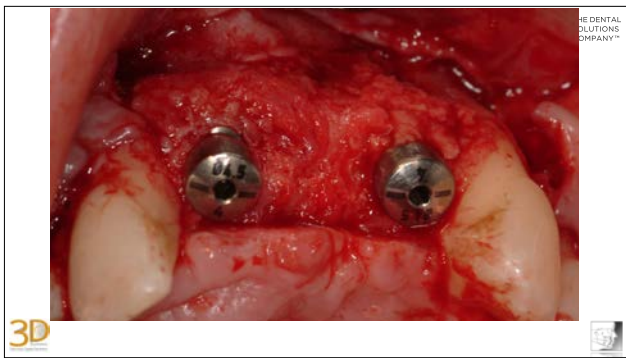
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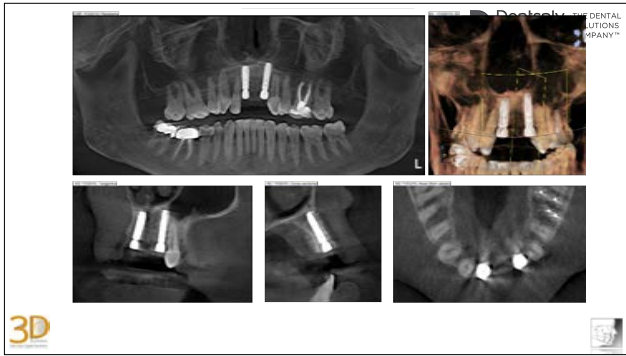
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Dentsply Sirona THE DENTAL SOLUTIONS COMPANY™

### Practice Benefits

"Time is Money!"

Procedure	"Traditional" Surgery	"Guided" Surgery
3 Implants	1 Hour	30 Minutes
6 Implants	2 Hours	1 Hour

3D

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**K.S.**  
 58 year old male  
 HTN, Cozaar, Klondine, HCTZ  
 NKDA  
 Bridge: 7-10, failing

3D

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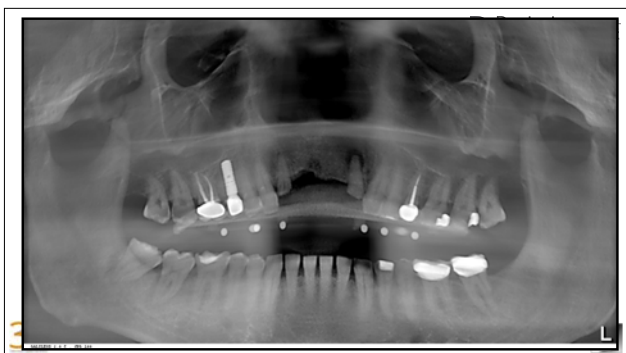
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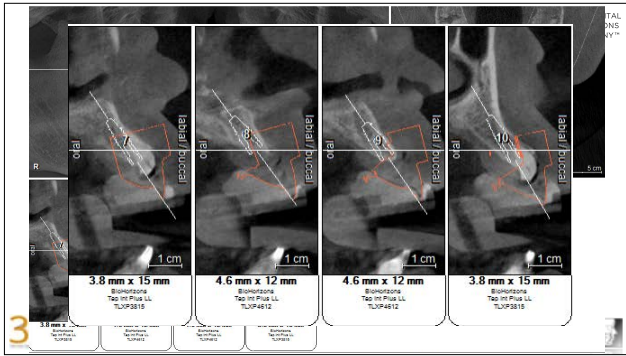
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## Treatment Plan

Extract # 7, 10

Ridge expansion 7-10

Implants: 7, 8, 9, 10

GALILEOS Guided Surgery

3D

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Item	7	8	9	10
Item Number	TLXP3815	TLXP4615	TLXP4615	TLXP3815
Implant length (mm)	15	15	15	15
Guide Site	Complete	Complete	Complete	Complete
Implant Site Preparation				
Drill Length (mm)	28	28	28	28
Drill Guide / Drill	Y / 2.0	G / 2.0	G / 2.0	Y / 2.0
Drill Guide / Drill	Y / 2.5	G / 2.5	G / 2.5	Y / 2.5
Drill Guide / Drill	Y / 3.2	G / 3.2	G / 3.2	Y / 3.2
Drill Guide / Drill		G / 3.7	G / 3.7	
Drill Guide / Drill		G / 4.1	G / 4.1	
Guided Implant Placement				
Depth Position	SP4	SP4	SP4	SP4
Implant Driver	3.83.0	4.63.5	4.63.5	3.83.0
	Grey-Yellow	Yellow-	Yellow-	Grey-Yellow

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3D



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### Why I do Guided Implant Surgery

- Prosthetically driven treatment plan
- Implants placed accurately, precisely and consistently
- Easier to restore, higher success rate
- Immediate implants/ provisionals- see at consultation if possible, rather than in surgery
- Allows me to provide the best treatment plan and care to my patients

3D



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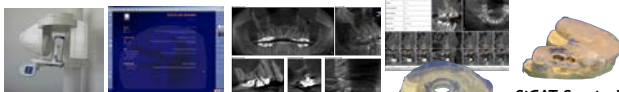
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### SIRONA SiCAT GALILEOS Improving 3D Clinical Workflow Efficiency

Galileos Database Diagnosis Planning Treatment



3D Scan Sidexis 2D Galaxis GalileosImplant SiCAT Surgical Guide  
Comprehensive Digital Dentistry Solutions

3D



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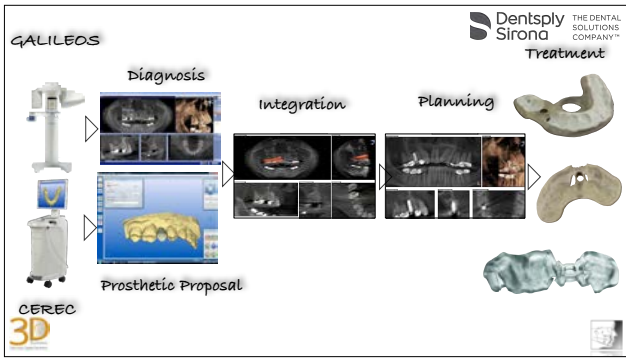
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**GALILEOS Image Improvement**  
 Updates every 6 - 12 months  
 MARS

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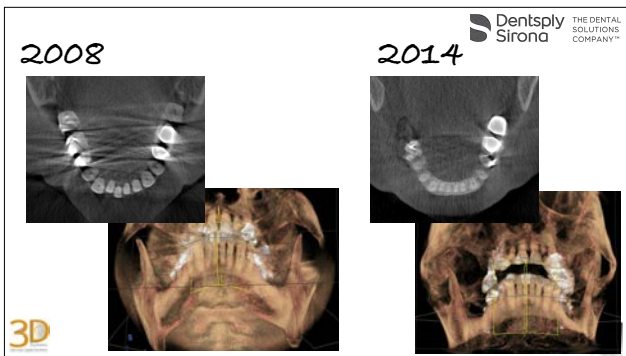
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**GALILEOS ComfortPLUS W/ INTEGRATED FACESCAN**  
 The FaceScan plots the patient's facial surfaces at the same time the x-ray image is taken.

**INTEGRATED IMPLANTOLOGY**  
 Implants with a final prosthesis in fewer visits with CEREC Integration.

**DOLPHIN INTEGRATION**  
 Dolphin Integration allows for the automatic alignment and superimposition of the FaceScan and 3D x-ray for a more seamless integration.




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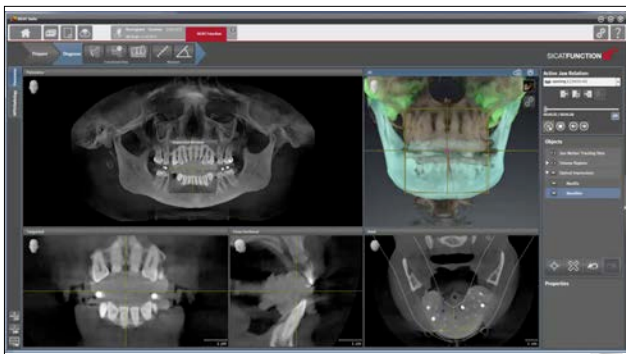
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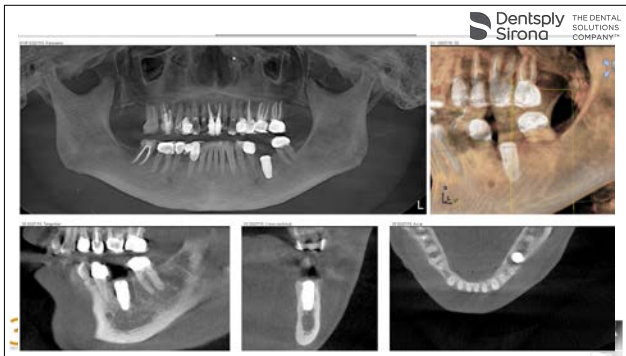
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 **DIGITALGUIDE**

 **SICAT.**  
a  company

 **Burbank**  
Dental Laboratory Inc.



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# Thank You!

 **Southern California Center**  
For Oral & Facial Surgery

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