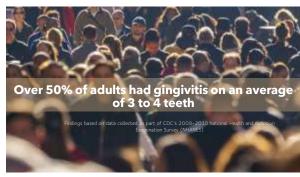
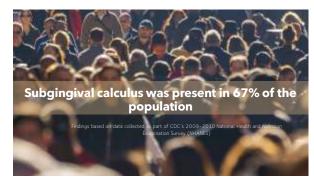
Redefining Diagnostic & Long- Term Maintenance for Optimal Health Results  Dr. Lou Graham Founder of Catapult Education	
Tonight, I will share with you a path that redefines how we approach periodontal and oral health  From advanced diagnostics to superior maintenance regimens  3 patient stories	
Part 1	





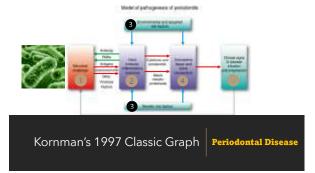
Accepts \$2% of Arrancian action agent the and coloride have some force of paradomic flowers (gent theseed, extending softe Corber for Demons Comparing and Procedure (CDCLI).  17. To a second of the Arrancian action of the Arrancian (CDCLI).  18. To a second of the Arrancian agent to extend the paradomic flowers and the Arrancian agent to extend the paradomic flowers and the Arrancian agent to extend the paradomic flowers and the Arrancian agent to extend the paradomic flowers are action as a factor of the Arrancian action and the Arrancian action action and the Arrancian action actio	47% 8%
	70%

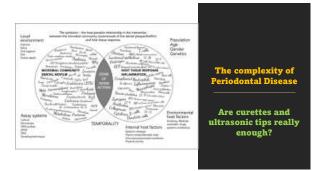




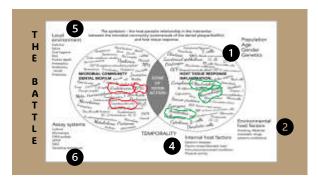


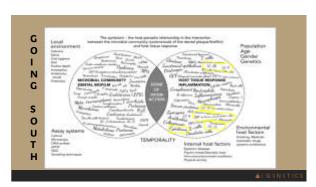




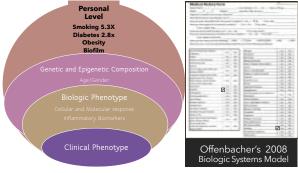














Diabetes as a risk factor:  Prevalence	
38.4 million people of all ages—or 11.6% of the U.S. population—has diabetes	
2.8 times more likely to develop periodontal disease per Offenbacher 2008	
19	

## **Type 2 Diabetes** as a risk factor:

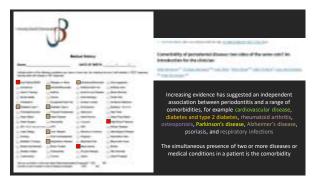
Prevalence

Total: 97.6 million people aged 18 years or older have prediabetes (38.0% of the adult U.S. population)

20

**Obesity** as a risk factor: More than 100 million adults have obesity, and more than 22 million adults have severe obesity

per Offenbacher 2008



Smoking as a risk factor:

In 2021, an estimated 11.5% (28.3 million) of U.S. adults currently smoked cigarettes.

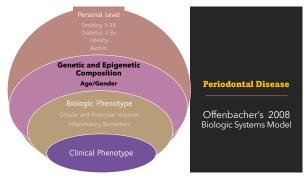
In 2022, an estimated 17.7 million people reported using marijuana daily

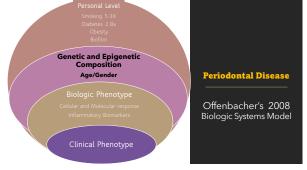
5.3 times more likely to develop periodontal disease per Offenbacher 2008

23

## **Smoking** as a risk factor:

E-cigarettes: 4.5% of adults used e-cigarettes Cigars: 3.5% of adults used cigars Smokeless tobacco: 2.1% of adults used smokeless tobacco Pipes: 0.9% of adults used pipes, including hookah



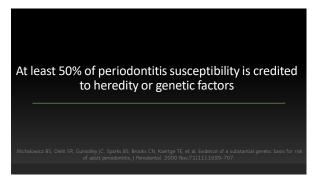


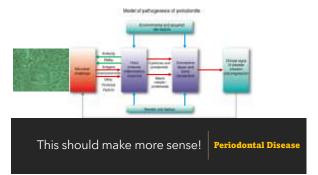






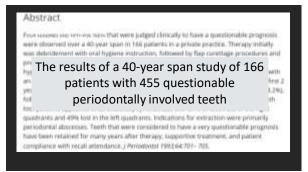


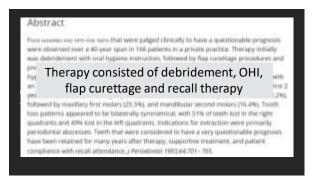


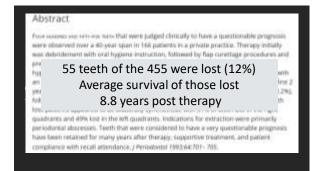


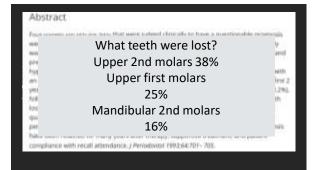


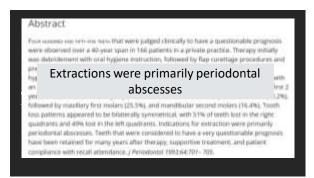








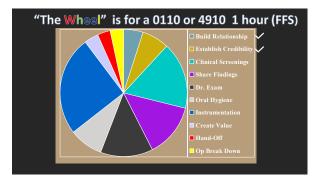




Abstract	
From schemo via services that were judged clinically to have a questionable progno	ais.
Conclusion: teeth that were considered to	und
have a very questionable prognosis have	with
been retained from many years after	1917 291
therapy, supportive treatment and patient	h
compliance with recall attendance	of v
have been retained for many years after therapy, supportive treatment, and patient compliance with recall attendance. J Periodividal 1992;96:201-205.	



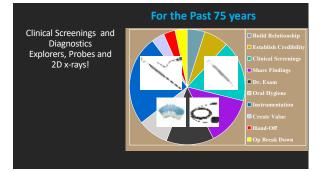








For 75+ years...x-rays, explorers and probes















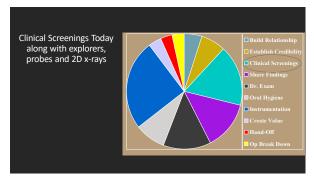




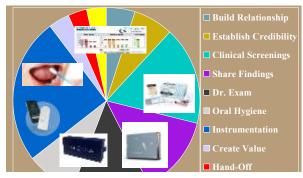
Enhanced diagnostics (adding to explorers, probes and 2D x-rays) equates to enhanced information, communication and ultimately...

**Treatment Plan Conversions** 

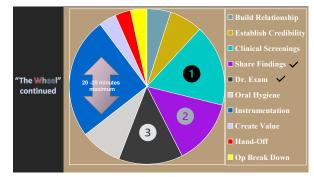
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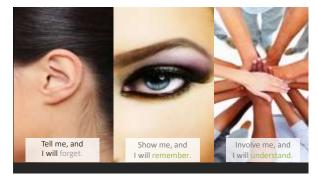












Ultimately, the one-hour recall exam has been transformed into a modern day oral health appointment

64



65



Long term patient, with both restorative, implant and periodontal	
treatments for the past 18 years	
Rosa at 67 comes in for her 4-month periodontal maintenance appointment	
Are we really doing enough?	
67	
Long term patient, with both restorative, implant and periodontal treatments for the past 18 years	
History of type 2 diabetes and the long struggle to maintain her A1C,	
long struggle with weight control, developed cardiac issues in the last 10	
years along with HBP	
Rosa	
NOSa	
68	
Long term patient, with both restorative, implant and periodontal treatments for the past 18 years	
History of type 2 diabetes and the long struggle to maintain her A1C,	
long struggle with weight control, developed cardiac issues in the last 10	
years along with HBP	
On a 4 month periodontal maintenance regimen	
Rosa	
Nosa	
60	

Long term patient, with both restorative, implant and periodontal treatments for the past 18 years
History of type 2 diabetes and the long struggle to maintain her A1C, long struggle with weight control, developed cardiac issues in the last 10 years along with HBP
On a 4 month periodontal maintenance regimen
Sleep Apnea with CPAP
Rosa

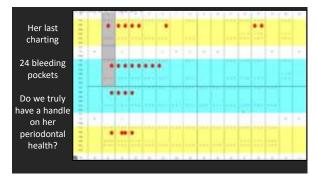
Long term patient, with both restorative, implant and periodontal treatments for the past 18 years

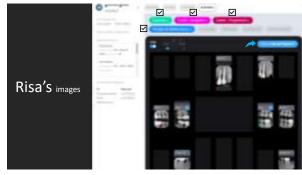
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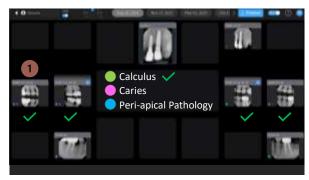
On a 4 month periodontal maintenance regimen

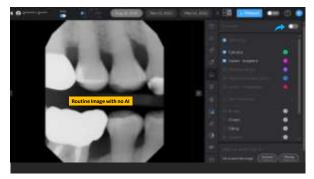
Sleep Apnea with CPAP

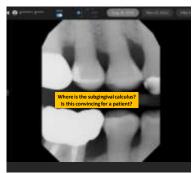
Flosses daily, power brusher, uses a Water Flosser, Perio Protect delivered 4 years ago







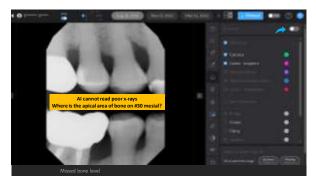




#### **Dental Calculus**

The 2020 study found that digital radiography had an average sensitivity of 50% and an average specificity of 82.2% for detecting dental calculus. The study also found that the sensitivity of detection increased as the size of the calculus deposits increased

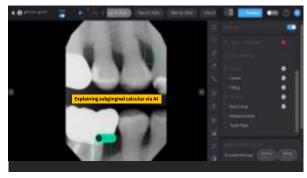
76

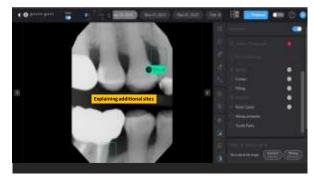


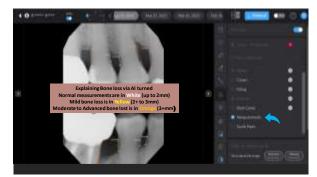
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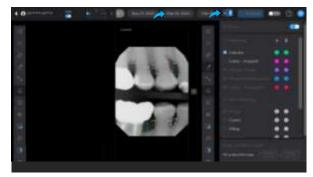


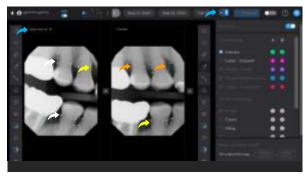


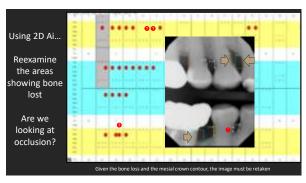




## **Comparing to Past Images**







24 Bleeding Points Periodontal Probing Subgingival calculus 2D Al Continuing loss of bone 2D Al

# 

89

## How does diabetes affect periodontal disease?

Diabetes can cause blood vessels to thicken, which can reduce blood flow to the gums and bones and thus make both tissue and bone more susceptible to infection

Diabetes can increase the amount of glucose in saliva, which can lead to more plaque and bacterial growth

Diabetes can cause the body to produce less saliva, which can lead to a build-up of food particles, bacteria, and dryness

Diabetes can increase the levels of proinflammatory mediators, such as metalloproteinases and chemokines

How does periodo	ntal disease	affect diabet	es?
ections from untreat od sugar to rise, ma			

How important is it to control her periodontal health?



She has come to our office over 75 times for periodontal treatments, including multiple surgeries and for the last 4 years....

**Periodontal maintenances** 

94



95

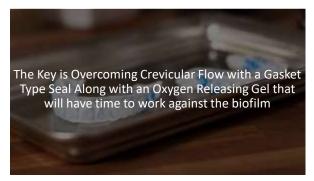


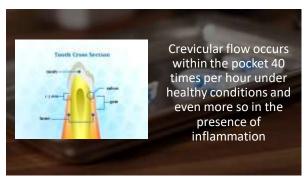


















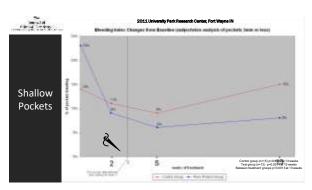


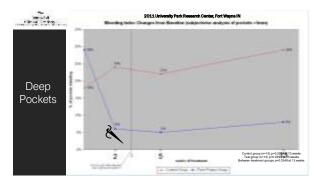


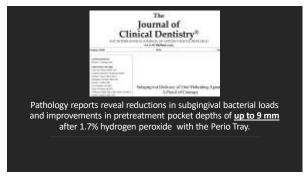
## Perio Trays After Initial Therapy and Before SRP This randomized, examiner-blind, parallel-design, clinical trial compared the effectiveness of SRP to daily treatment with 1.7% hydrogen peroxide gel using prescription, custom-fabricated dental trays as an adjunct to SRP Put M and Proslin H. Custom Tray Application of Peroxide Gel as an Adjunct to Scaling and Root Planing in the Treatment of Periodoritis: A Randomized, Controlled Three-Mooth Clinical Trial. The Journal of Clinical Densistry. 2012;23(2):48-56.

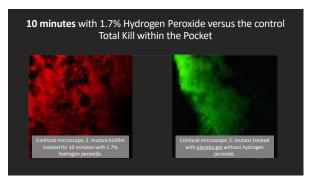


# Perio Trays After Initial Therapy and Before SRP Moreover, the effectiveness of the peroxide/prescription tray system was manifested at all sites throughout the mouth and encompassed both initial shallow (<5 mm) and deep (> 5 mm) periodontal pockets." Put M and Proskin H. Custom Tray Application of Peroxide Gel as an Adjunct to Scaling and Root Planing in the Treatment of Periodontitis. A Randomized, Controlled Three-Month Clinical Trial. The Journal of Clinical Dentistry. 2012;23(2):48-56.











#### Clinical Uses

Patients after our S/P laser therapy, and yes even after surgery that still have BOP and inflammation and often good oral hygiene (refractory) and what about those with BAD hygiene

Patients prior to active therapy

Patients with on-going peri-mucositis with implants along with peri-implantitis

Patients who have implants placed/restored and have periodontal issues in other areas of their mouth

Patients with medical histories that must reduce their oral inflammation

High caries risk patients, especially xerostomic patients, the geriatric group is one key example (include MI paste treatments in trays)

Oral Cancer patients with radiation ports

116

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119

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122

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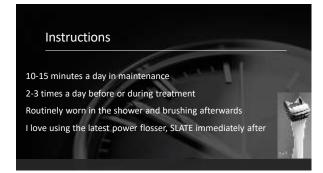
In our practice, we charge \$425 per tray		
This is included in our UDP Plan*		
Digital is \$450		
2 tubes are included at delivery		
Costs		
Refill gel is \$16 per tube and we sell for \$25		
Assume 10 tubes a year and this will confirm if they are using it		

Assume a \$250-300 profitability per arch from a procedure that requires the assistant taking impressions and delivering the trays

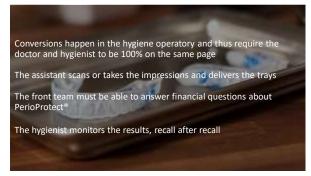
Over \$500,000 in profits in 10 years
Plus, their recall care

Plus, approximately 10 tubes per year per patient \$90 per patient profit yearly With far better results

126











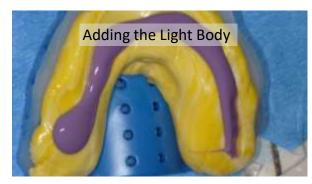


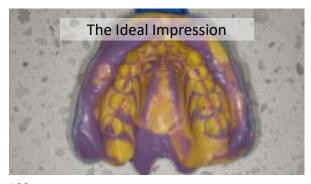






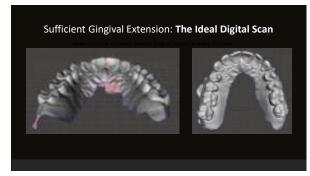


















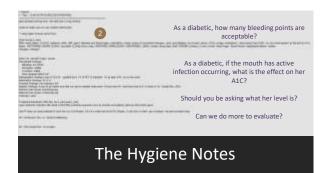




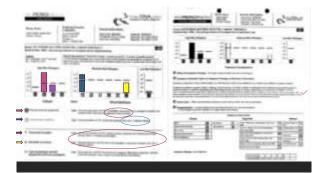




Contract Contract		
	Before the patient arrives, is she purchasing	
The second secon	Perio Gel?	
Control of the Contro	relio del:	
the Person of the Lord Control of the Lord Con		
	If yes, was she reminded to bring her trays to	
Section of the Control of the Contro	confirm the fit?	
The state of the s	How often is she wearing them?	
Control of the control of	And the big red flagwhy is she still bleeding	
Commence of the Commence of th	year after year if she is wearing the trays?	
and the property of the contract of the contra	7	
P (March II) or Decisions)		
The Hygiene Notes		



In 2015....we did an Oral DNA Test





Given her high risk with diabetes, HBP, and her clinical history, the nature of this episodic disease, the altered immune response...

Is probing really enough?	
is pressing really eneaging	
155	
Do you require more information for	
better treatment outcomes?	
156	
150	
VEC	
The answer is <b>YES</b>	
We need a baseline and then follow-ups	
to determine yearly status at a minimum	
157	

### **Bacterial DNA Testing**

Microbe Link DX, Oral DNA

#### Saliva Testing

Oral Genome. Bristle

## **Genetic Testing**

AI Genetics, Viome

Additional Testing to Customize Your Care

158

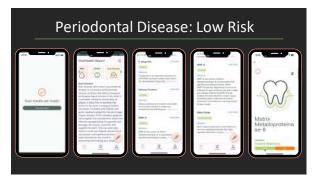


159



















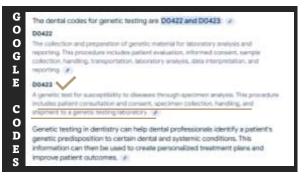












If Rosa's test came back high risk (genetically)

Do you refer her to a specialist to develop a plan?

Are you more determined to go beyond traditional scaling and planning approaches? Lasers? GBT?

Does bacterial testing become mandatory as baseline and for subsequent reevaluations?

Do you utilize other salivary testing in the same or a different manner?

If Rosa's test came back high risk (genetically)
Do enhanced <u>long term preventative approaches become</u> <u>mandatory</u> , such as probiotics, PerioProtect and other periodontal specific products such as Slate (power flosser), LivFresh toothpaste as examples?
How do you eventually determine her recall schedule?
Does she become more motivated for additional care with a positive Al Genetic Test?

# **Homecare**

177

Are traditional toothpastes, floss and water flossers the only options after they leave our office?

Are we evaluating how they brush and floss their teeth?

179



180

The #1 issue Getting Rid of Plaque

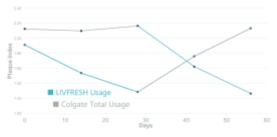
What if a toothpaste could reduce plaque 250% more than the others?

182

What if this change had NOTHING to do with the type to toothbrush, would you be interested?

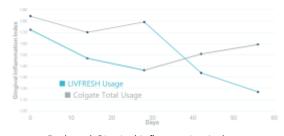
183





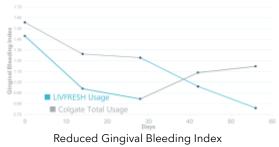
Reduced Plaque Index

185

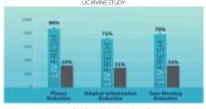


Reduced Gingival Inflammation Index

186



## PERCENTAGE REDUCTION IN VARIOUS INDICES



\*Comparing LivFresh Dental Gel (test) with Colgate lotal (control)
Dadkhah, M et al. "Effects of a Novel Dental Gel on Plaque and Gingivitis: A Comparative Study." Dentistry (Sunnyvale,

188

#### Getlivefresh.com



189





Slate's new Sonic Flosser











Who should be reinforcing her tray usage?
Are you making sure she is
buying the gel?
197
If she begins active therapy again,
she should be wearing these trays
twice a day
198
Once a day may be enough on
Once a day may be enough on maintenance, but for high-risk
Once a day may be enough on maintenance, but for high-risk patients, we often customize this
Once a day may be enough on maintenance, but for high-risk

We should be evaluating the fit at every visit	
200	

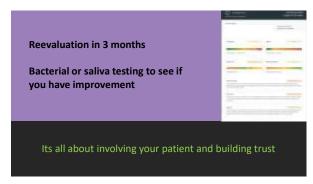
We should be reviewing placement of the gel

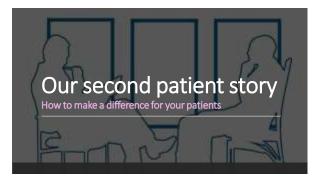
201

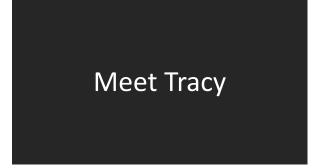
Reevaluation in 3 months
Bacterial or saliva testing to see if
you have improvement

Its all about involving your patient and the building of trust

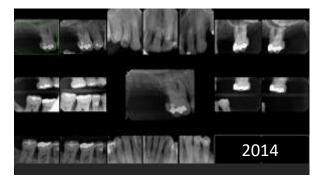


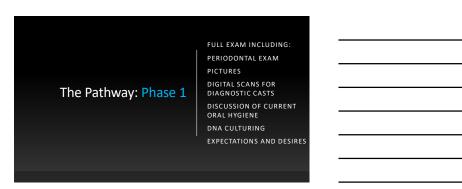






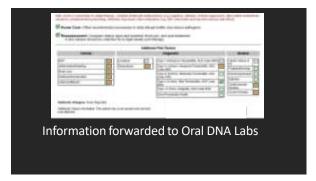


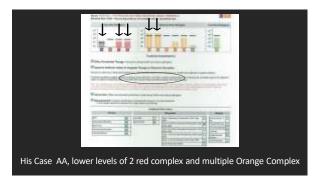


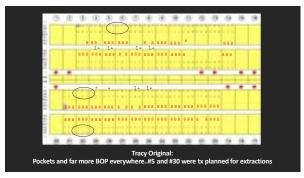














Is it realistic to try and save the majority of his teeth versus extracting his teeth and delivering dentures, or implant supported dentures?

215



216

Studies have shown that the retention of periodontally questionable teeth do last longer than predicted

Yet, their effect on patients who have implants placed concurrently also show a hire predilection to periodontal issues unless very well maintained

Periodontal Disease

This study <u>concluded</u> that implant survival rate was acceptable in individuals with a history of periodontitis who were in a <u>maintenance program.</u>

Karoussis IK, Kotsovilis S, Fourmousis I. A comprehensive and critical review of dental implant prognosis in periodontally compromised partially edentulous patients. Clin Oral Implants Res 2007;18(6):669–79.



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Thus, the question....

What type of maintenance program?



219

After the extractions of #5 and #30

After basic restorative work

After his periodontal treatments and implant placement

I learned about PerioProtect



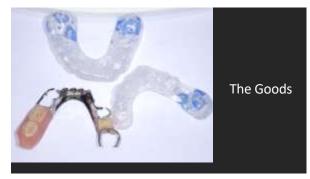
















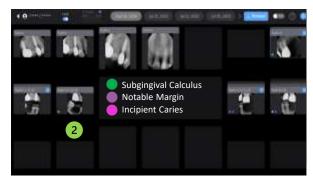


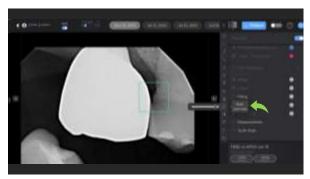


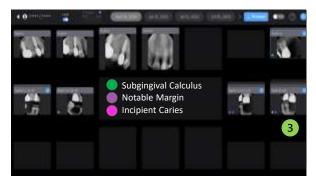
Using 2DAI to guide us to be better



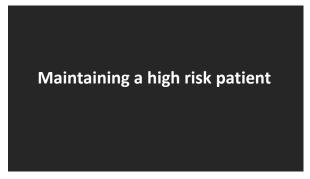


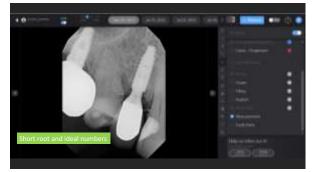


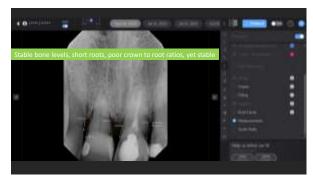
















New Patient 2008

The issue, long standing refractory periodontal disease

59 years old at the time

Takes only Crestor

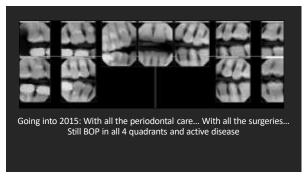
Meet Tom



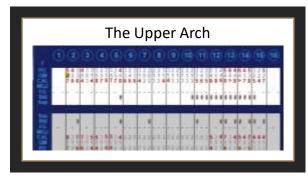


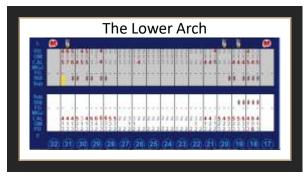






In fact....far more than 10 bleeding sites which is our barometer to enhance our treatment with PerioProtect

















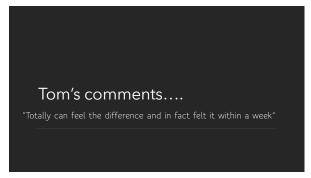


















Superior Information vs Traditional Diagnostic Information

Superior Communication versus 'age old patient" communication

Superior Information vs Traditional Diagnostic Information

Superior Communication versus 'age old patient" communication

Superior Documentation in coordination with both of the above

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Superior Information vs Traditional Diagnostic Information

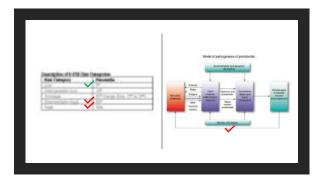
Superior Communication versus 'age old patient" communication

Superior Documentation in coordination with both of the above

Superior Involvement with the patient

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#### www.oralrisk.com

#### **\$110 USD**

275

G The dental codes for genetic testing are D0422 and D0423: \*\* 0 0 The collection and preparation of genetic material for laboratory analysis and reporting. This procedure includes patient evaluation, informed consent, sample G collection, handling, transportation, laboratory analysis, data interpretation, and L reporting (#) 00423 E A genetic test for susceptibility to diseases through specimen analysis. The procedure includes patient consultation and consent, specimen collection, handling, and C shipment to a general testing laboratory. 0 Genetic testing in dentistry can help dental professionals identify a patient's D genetic predisposition to certain dental and systemic conditions. This E information can then be used to create personalized treatment plans and improve patient outcomes. 4 S

276

### If Risa's test came back high risk (genetically)

Do you refer her to a specialist to develop a plan?

 $\label{thm:continuous} Are you\ \underline{more\ determined}\ to\ go\ beyond\ traditional\ scaling\ and\ planning\ approaches? Lasers?\ GBT?$ 

 ${\sf Does\ bacterial\ testing\ become\ mandatory\ as\ baseline\ and\ for\ subsequent\ reevaluations?}$ 

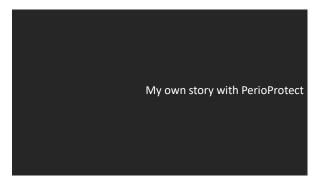
Do you utilize other salivary testing in the same or a different manner?

Do enhanced <u>long term preventative approaches become mandatory</u>, such as probiotics, PerioProtect and other periodontal specific products such as Slate (power flosser), LivFresh toothpaste as examples?

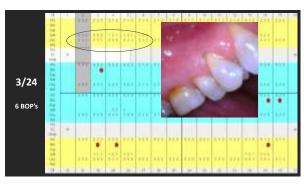
How do you eventually determine her recall schedule?

Does she **become more motivated** for additional care with a positive AI Genetic Test?

GBT?









The "Package Deal"

281



The Sequence

10 minutes PP Rinse the trays (in the shower) Slate 30-60 seconds Power Brushing

282



	Superior Information vs Traditional Diagnostic Information			
		_		
		-		
284				
	Superior Information vs Traditional Diagnostic Information	•		
S	uperior Communication versus 'age old patient" communication	•		
		-		
		•		
		-		
285				

Superior Information vs Traditional Diagnostic Information

Superior Communication versus 'age old patient" communication  $\label{eq:communication}$ 

Superior Documentation in coordination with both of the above

Superior Information vs Traditional Diagnostic Information

Superior Communication versus 'age old patient" communication

Superior Documentation in coordination with both of the above

Superior Involvement with the patient

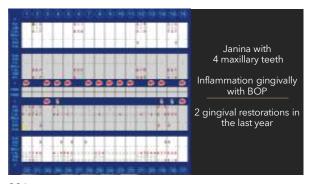
287

## Two final words that further build trust

288

# Every referral...a handwritten TY

In her early 90's,		
Wears a partial		
Caries related to her partial along with BOP in the same areas		
Janina		













Am PerioProtect Trays use with PerioGel for 10 minutes prior to brushing

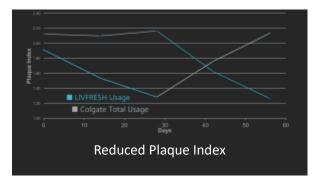
PM PerioProtect Trays with MI Paste for 30 minutes <u>after</u> brushing for caries prevention <u>approach</u> (she often just slept in the tray) Her Regime

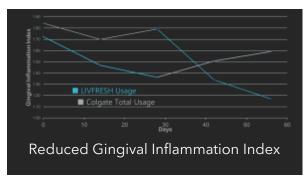
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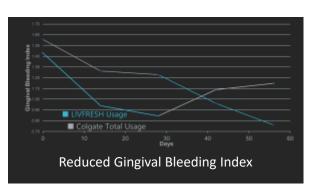
Oral Hygiene Recommendations

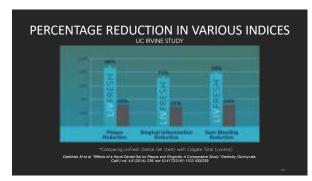
LIVFRESH®	
FRESH (" CUESH)	
N. III	
299	
What if a toothpaste could reduce	
plaque 250% more than the others?	

What if this change had NOTHING to do with the type to toothbrush, would you be interested?







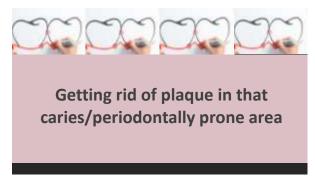




Catapult in 2023 reviewed a game changer in the flossing world











Tell Your Patients

Just 30 seconds





Woven floss has 450 strands to help remove plaque and biofilm

No wax, no toxins, no Teflon, no PTFA and no PFA

315







318



The Sequence

10 minutes PP Rinse the trays (in the shower) Slate 30-60 seconds Power Brushing