

June 19, 2006: Blog on Nanotite Surface - Does Research prove any real Clinical Advantages?

Dr. L. asks:

Some of the dental implant manufacturers have started using a new surface coating called NanoTite. This is supposed to stimulate a more rapid osseointegration. Has anybody started using Nanotite coated dental implants? Is there truly an additional benefit from this new surface? Have you attempted early or immediate loading with these? Any other thoughts? Thanks.

1. *AB Says:*
[February 16th, 2007 at 9:17 pm](#)

This is 3"lies" newest technology. I have not seen their research on new surface. (and we probably never will because it doesn't exist)Sorry for the negative post but after you have been burned time and time again... (especially with the NT) This just happens. They are a marketing machine. Failure is not an option.

2. *Jerry Niznick Says:*
[April 1st, 2007 at 12:20 am](#)

I do not need to place an implant to know what I do not like about it. In my opinion, the 3i implant has the worse surface and internal connection in the industry and here is why I say that:
Surface; from 1982 through 1986, I was blasting my implants with Aluminum Oxide and cleaning them with a mild acid that did not remove any material from the surface. In 1986, I did away with blasting and etched the surface with HF1 acid. When the research results of the VA study showed a significantly lower success rate in soft bone with etched implants vs. the rougher HA, I went back to blasting the surface but this time used HA crystals in a process that was called Resorbable Blast Media (RBM). I called it SBM for Soluble Blast Media. Zimmer, BioHorizons and Lifecore use the same roughening process and there is no need to change. 3i is the only company using acid etching, a chemically smoothing process for the last 10 years and now is trying to roughen their surface

with HA crystals deposited on the surface in a layer that is less than 5 μ , claiming it doubles the surface roughness. That still leaves it about 10 times smoother than RBM, SBM or HA.

The 3i internal connection, now licensed by Zimmer on the patent I sold them, falls far short of my objectives in developing such a connection in 1986. The 3i Certain implant uses a 2.5mmD double hex below a 3.0mmD hex claiming that the 12 sides allows for adjustments every 30 degrees (12 positions), but if they just indexed the contour and angle of their abutments to the flat of the hex, the dentist would just need to position the flat at time of implant placement to control the direction of the angled head to allow 360 different positions. Because 3i chases the double hex myth for increased adjustability, they need to use a larger upper hex (3.0mm) and that means that they can not make a 3.7mmD implant... the narrowest with the double hex is 4.2 (I think) with thin walls. And don't get me started about their clicking abutment to know that it is fully seated. Why wouldn't an abutment fully seat as it has no where else to go if it is an internal hex.

1. *S. Freeman* Says:

[April 1st, 2007 at 1:12 pm](#)

Well...Mr. Niznick, I do really respect your studies and researches, but please make sure you know what you are talking about. 3i Osseotite surface is the most documented and the most studied surface nowadays! HA on the Nanotite surface is aimed at increasing and improving initial osseointegration (not at increasing its surface). And remember that it is a discrete deposition (not layer that is made through plasma blasting). I really advise you to try 3i. It has a lot of advantages on other systems. Good luck.

2. *Alan Snyder* Says:

[April 2nd, 2007 at 7:33 pm](#)

Blah Blah Blah....but you never answer the question you just give your canned responses and hope somebody forgets about the questions raised. Let's start today's lesson by answering my last two questions, for times sake I posted it again. Thanks bud! BTW increasing surface area is different than surface roughness...just checking. You would think that you would find out all the information about this before sticking your foot in mouth. If you persist I will cut and paste statements you made earlier. Stick to answering the questions and I will save you that embarrassment. Agreed?

Alan Snyder Says:

March 26th, 2007 at 2:18 pm

Comment: Jerry Niznick While 3i claims that it doubles the roughness; it is still 10 times smoother than any of the above surfaces.

Response: Nanotite is 10 times smoother then the surfaces you state? Can you help by showing me the studies that suggest that? If you are going to make a claim then please back it up.

3. *toothguyATL* Says:
[April 3rd, 2007 at 11:42 am](#)

You have to trust me that I am not the biggest Jerry N. fan, as his responses usually serve his ends and his means; however, he often makes sense. I was caught holding the bag with the 3i Tapered NT implants and their failure. I was even told that it was my fault because I didn't understand BIC "bone implant contact" with tapered implants. Subsequently, my other system that I have been placing for years was tapered and I had no "BIC" problems with failures.

Lets just agree that based upon the 3i NT, Freilich II, Calcitek HA, Replace Select 3.5 fractures, and Astra's true "clinical bone loss" rates, that there are issues with all systems and that we should not be vehemently defending them like we are dependant share holders, or their sales reps.

In fact, until you have several years and several hundred of these placed and loaded in your own private practice- without being incentivised by the company, please then forward your insight to the rest of us. Until then please refrain from regurgitating what is on the company web site, or what the rep left at your office and consider your experience for what it is-anecdotal.

4. *Jerry Niznick* Says:
[April 4th, 2007 at 12:27 am](#)

Comment: Jerry Niznick While 3i claims that it doubles the roughness; it is still 10 times smoother than any of the above surfaces.

Response: Nanotite is 10 times smoother then the surfaces you state? Can you help by showing me the studies that suggest that? If you are going to make a claim then please back it up.

NIZNICK RESPONSE: There are measuring bars on SEM pictures. Using these bars, you can determine that the Osseotite pits are 1-2u. I think the company acknowledges that. Using these same bars on a machined surface, you can determine that the grooves are 10u apart and with blasted surfaces the pit craters are 20u across. You do not need a study to do the math, although there have been

a number of studies done by Albrektsson and Weinerberg measuring surface roughness. We can debate whether a 30u layer of HA will stimulate more bone response than a 2u layer especially if both are susceptible to resorption.

5. *Dennis Nimchuk Says:*
[April 4th, 2007 at 1:25 am](#)

It's nice to see such a diversity of brand loyalties. Company reps are doing a fine job of establishing rapport with their customers. Of course the relevant thing is that all medium roughened surfaces have high success rates approaching 97% when there is good bone. Even the lesser rough surfaces have pretty good success. Probably the "special surfaces" will prove out to also have good success. Maybe they will get up to 97.5% success or better, or maybe not. As for me, I quite like the idea of Dr. Niznick's option to choose a high quality implant at half price. I think patients will like it also.

6. *Gary D Kitzis, DMD Says:*
[April 4th, 2007 at 7:35 am](#)

I hate to have to say this and ruin a perfectly good debate, but all of the rough surface implant systems will work if the surgical and restorative people know what they are doing, have examined their patients well and know how each of the systems work. All the systems have little quirks and tricks that you need to be familiar with. (And it is NOT to say that just because you know the tricks of the system that you really know what you are doing.) All the systems use fairly similar tooling and techniques for their insertion and restoration. There are various factors involved that lend themselves to personal preference, and some manufacturers have clearly better surgical instruments for placing their implants, but once they have been inserted, they will all osseointegrate and be maintained. I won't even get into the restorative option arguments. This thread sounds like a bunch of guys arguing over whether BMW, Audi or M-B makes the better car, all citing a statistic here and there trying to make their points.

7. *Jerry Niznick Says:*
[April 4th, 2007 at 6:49 pm](#)

Tom Wilson from Dallas presented at the 2006 AO meeting on 300 Straumann ITI implants with SLA (old surface) placed in immediate extraction sockets and immediately loaded. He got 98% success. I asked him from the audience whether he thought he would get 99% success if he used their new surface SLActive which cost \$50 more per implant. He had no answer because the question is rhetoric. You could not devise a study that could differentiate between 98% and 99% with so many other variables at play other than the surface. All the claims about Osseospeed, TiUnite, SLActive, and Nanotite are just marketing BS and shows that these companies do not have much else to claim as a differentiating feature of their products. I have used the same medium rough surface for 15 years... HA blasted. So have Zimmer, BioHorizons and Lifecore. Studies at LSU

university in the 1990's showed no difference in %bone contact or torque removal after one month between this surface and HA but the HA had a stronger bond after two months which may not be clinically significant once osseointegration has been achieved. An article by Shalabi in COIR April 2006 showed that inserting a tapered implant into an undersized socket in soft bone increased not only initial stability but also torque removal and %bone in contact.

8. *Dr Les Ratner Says:*
[April 5th, 2007 at 8:04 pm](#)

If that is true, than any tapered implant put into soft bone while under sizing the socket would work, correct?

Just trying to understand your point on a granular level.

9. *Jerry Niznick Says:*
[April 6th, 2007 at 11:53 pm](#)

ANSWER; Implants with the taper all at the bottom, like Nobel Replace and 3i's Certain implant would result in greater compression near the crest if they were inserted into an undersized socket because all the expansion of the opening has to occur in a very short distance. This is in contrast to the evenly Tapered Screw-Vent and new Spectra-System implants from Implant Direct which taper from top to bottom allowing it to act like an osteotome. Another critical factor is that only these two implants are inserted into sockets prepared with straight step drills. Inserting a tapered implant into a straight socket (smaller diameter socket at the bottom because of the step-in of the drill) has additional advantages such as backing the implant out a little does not reduce its stability and inserting it a little further down the straight socket does not increase the compression.

10. *Mike Sellers Says:*
[April 6th, 2007 at 5:18 am](#)

COMMENT JERRY: Tom Wilson from Dallas presented at the 2006 AO meeting on 300 Straumann ITI implants with SLA (old surface) placed in immediate extraction sockets and immediately loaded

Question: When you say immediately loaded, are you referring to a restoration placed that day and put into occlusion. Or are you referring to a healing abutment placed and you say immediate because there has to be some measurable load on it/ or are you saying that temporized the implant and left the crown out of occlusion?

11. *Jerry Niznick Says:*
[April 6th, 2007 at 11:56 pm](#)

NIZNICK RESPONSE TO MIKE SELLERS QUESTION ABOUT IMMEDIATE LOAD:

I don't know how he loaded the implant at the time of implant placement but I would assume that he provided a temporary crown for esthetics, not function. To get 98% success with immediate load in extraction sockets, he had to be doing a lot of things right.

12. *Mike Sellers* Says:

[April 6th, 2007 at 5:29 am](#)

That was not the point you were trying to make but it's so frustrating when people in the field just throw these terms out with out defining them....BTW what is your point....buy your implant and save money. You treat an implant like a commodity, so you are trying to win the hearts by the mighty dollar.

Jerry, I bet you have never seen the inside of a Wal-Mart, Target or Marshall's. You are simply trying to make more money buy selling a cheaper product and making other dentist feel like they are being ripped off it they use a large implant company. You also simply ignore advancements in the field, you simply dismiss them as trivial and non material as you go on and on about the 90 VA study and your implant.

13. *Jerry Niznick* Says:

[April 7th, 2007 at 12:31 am](#)

Your right about Wall Mart, Target and Marshall's...but I am a Cosco member for the last 10 years and I slept at a Holliday Inn last night. My financial success in the implant market is the result of providing high quality innovative products for two decades. Zimmer's success today is because they are selling products I developed that have stood the test of time, including the surface and the connection. You can learn a lot about a company by what they claim is their unique selling proposition. When you have four major companies (Nobel, Straumann, 3i and Astra all claiming faster healing with their new and improved surfaces, while not comparing their surfaces to that of any of their competitors, or to HA, you have to wonder if there is really any difference between all these surfaces. None of them try to differentiate by what is really important... simplicity, versatility and value.

I do not "ignore advancements in the field." That would be bad business. I do dismiss many of the claimed advances as "trivial and non material" but I explain why I believe that to be the case. If I thought they were good features, I would incorporate them into my products because they would sell implants, but in the end if they prove to be trivial and non-material as I think they are, then that would be bad for business. I guess I could come up with a surface that started with TiUnite followed by blasting and etching with HF1, sprinkled with HA crystals and packaged in sterile saline. I could call it "TiSpeedNanoActive."

14. *Mike Sellers* Says:
[April 9th, 2007 at 12:45 pm](#)

Your response speaks volumes to your motives, thanks for making my case so easy.

15. *Jerry Niznick* Says:
[April 9th, 2007 at 4:43 pm](#)

My motives have been clear for the last 25 years... make the best product I could and sell it for a reasonable price so that my implant business will be successful. That is no surprise. What is not clear is what is the "case" you are trying to make and what are your motives/affiliations with various implant companies. Your last name indicates that you may sell implants "Sellers" which is OK, but it takes more than pontificating about various "innovations"... explain why you think they are advantageous using other than a company's marketing claims.

16. *StudentoftheGame* Says:
[April 11th, 2007 at 12:37 am](#)

Dr Niznick,

I've used just about every system there is in all types of situations. I like Zimmer, BioHorizons, and Astra implants the most. What is your opinion on Astra implants be it the surface or design. I ask because they have little research behind their design but I get very good results from their implant.

I think BioHorizons has the most research and is a very affordable system. Zimmer is nice but expensive. I know you have a new company selling affordable "imitation" implants but I have already read the advantages from your previous comments.

If you want to donate some implants to my department I would be happy to compare them long-term to other systems. We can end this debate once and for all.

I respect your opinion as many at the university I am at know and commend your past efforts and contributions.

17. *Jerry Niznick* Says:
[April 11th, 2007 at 1:34 am](#)

I will try to compare and contrast the three implant systems you inquired about.

SURFACE and PLATFORM: Zimmer and BioHorizons have the same surface (HA blasted) and now that Zimmer has licensed BioHorizons on the internal connection, they have the same platform. My Legacy abutments fit both systems

and offer design and cost advantages. Astra's surface was blasted with TiO which left imbedded particles. They now etch with HF1, something I did from the mid 1980's as a surface cleaning process. It removes the TiO and creates smaller pits which may account for the slight improvement in bone attachment compared to their old surface. No studies exist that compare these two surfaces and there probably is no clinically significant difference between either one. Of the three implants only the Zimmer Screw-Vent (my earlier invention) is tapered and goes in with a straight drill allowing for bone expansion in soft bone. A study by Shalabi in COIR April 2006 shows that surgical protocol can be a significant factor in bone attachment and initial stability. The Astra implant offers micro-threads near the top which has been demonstrated to reduce stress near the crest, a factor that may retard bone loss so that is a plus for that design (a feature I incorporated in my new system). The platform of the Astra is internal like the other two but because it strives for a conical connection, the abutments do not cover the top of the implant which can have esthetic limitations in that its abutments have undercut just above the top of the implant. All three provide adequate lateral stability... no real advantage to Astra's conical or Zimmer's friction fit over Bio-Horizon's internal hex connection other than the fact that they do not make their own implants so precision fits may be less predictable.

RESEARCH and PRICE:

I think BioHorizons has the most research and is a very affordable system. Biohorizon's "research" was biomechanical with claims that different threads were needed for different qualities of bone, but that went out the window when they introduced the Prodigy implant with just one thread. Square threads in my opinion are not desirable because they are not conducive to self-tapping other than in soft bone, and self-tapping insertion improves initial stability so important for immediate and early loading.

Zimmer is nice but expensive.

My new ScrewPlant implant is not an imitation or even a copy of the Screw-Vent from Zimmer. It is the next generation of design, with the taper starting at the top rather than 3mm below the top, with micro-threads and with an external bevel and no vents and a longer self-tapping groove. All this for about 1/3d the price! I will be making an implant called the Legacy which will copy the Screw-Vent platform. Think of it as Screw-No-Vent.

What university are you with? Keep asking the right questions as it is the only way to get the right answers. Jerry Niznick

18. *Dr P.P.* Says:

[April 25th, 2007 at 10:46 am](#)

I call Dr Niznick "El Che", because his revolutionary point of view in the implant Market. I was involved with IMZ implants in the late 80's; with the very beginning of 3i, with the Replace birth (Steri-Oss at that time) and with NobelBiocare since the merger. It took more than 20 years to realize that most of

what we hear from company research is just marketing bullshit!!!
Of course there are many clinicians doing research work independently but what companies do is take some of this data and using it to their own benefit.
Now I know that what I really need is a nice implant with a versatile prosthetic connection, beautifully machined, with a proven surface (RBM, SBM, SLA, and TiBlast), and all the extras included (straight abutment, impression coping, cover screw, comfort cap...) at an unbeatable price!!
Thank you Dr Niznick for your unexpected gift. Thank you for coming back into the implant business (i.e. Implant Direct Spectra System).
Dr. P.P. ay to get the right answers. Jerry Niznick

19. *John Smith Says:*

[April 28th, 2007 at 1:03 am](#)

Please, gentlemen! BIOMET 3i's, NanoTite is not a marketing stuff! All the revolutionary things faced a lot of opponents all over the world. But only time is going to prove what was right and what was wrong, where was marketing and where was science. I just wonder why most of you are so conservative and prefer to use cheap, simple systems. Why you don't want to adopt innovative things in the industry. Please tell me, can you really solve all your clinical situations with Zimmer or Biohorizons? When patient has type 3 or type 4 bond? I would never believe you if you tell me yes. Don't you want to become a successful doctor?

1. *ManAlive! Says:*

[April 28th, 2007 at 3:58 am](#)

This is all quite amusing...

There is a very good chance that 3i will have to drop the 'Nanotite' name in the future as it has been in use by Bicon for some time and presumably registered. I understand negotiations are ongoing...

This is no 'breakthrough' by 3i, just marketing rubbish propagated by those with a business interest in Biomet/3i.

I have had just had some marketing literature through the post from 3i about their Nanotite surface and it is utter cr*p, absolute utter cr*p. In fact it's worse than that, it is an insult to those of use who choose to make decisions for our patients based on science. Just count how many times the word 'may' is used in their claims! They have taken the 'Differentiate or Die' approach to marketing too far.

No doubt a Biomet/3i "Opinion leader" or "expert" will be along soon to defend their product. Just bear in mind that Biomet/3i spend at least 50% of their budget on marketing.

This means that of the \$400 you spend on your 3i implant, over \$200 goes on adverts, Reps and buttering so-called Opinion leaders (free lunches, free implants, free holidays and courses etc etc).

2. *Dishearted* Says:

[April 30th, 2007 at 9:37 am](#)

When will Biomet/3i show us the clinical data on Nanotite? I know they have a couple of rat studies published. Oh, yeah... They do not have any. Let's see what a discrete amount of HA does in year five, six and seven!

3. *Biomet 3i* Says:

[April 30th, 2007 at 9:50 am](#)

Sorry, but the last post simply can't go unanswered and has nothing to do with the intention of this forum. The NanoTite name issue will hopefully be resolved soon. The statement made is inaccurate. It is a complicated matter, but to answer the question, no it is not a registered mark for either company at this point in time. The products are also very different in many substantial ways. There is plenty of science behind the Biomet 3i NanoTite surface and much more on the way. All that is asked is before deciding based on a ranting post(s), review the material available. There are pre-clinical, clinical and human histology results available. Using the proven Osseotite surface as the control in many of the studies the comparative results are overwhelming. They are actually far more compelling than many of the same study results done year's back comparing Osseotite to a machined surface and we all recognize the substantial impact that difference made in clinical outcomes. And before using this statement to bash Osseotite, please consider that it is a very well accepted surface serving the needs of patients and clinicians alike for over ten years. The statement on what is spent on marketing is completely absurd as to not warrant a reply.

4. *ManAlive* Says:

[April 30th, 2007 at 10:22 am](#)

The statement regarding marketing expenditure is fact. The fact that you might not want people to know about is not surprising!

Biomet/3i (as well as Straumann and Nobel) spend more than 50% of their income on marketing. Fact. Look at your company's financial records.

When you buy a \$400 3i implant, \$200+ goes on marketing. I'm sure Jerry Niznick can give us some inside info here.

5. *sfimplant* Says:

[April 30th, 2007 at 10:30 am](#)

Well this discussion is about Nanotite, not about marketing. So who cares what anybody spends on marketing. It's the science and studies that matter.

But, to clear up the marketing issue: Every medical device company spends fortunes on marketing, since these are businesses and not non-profits. Nothing wrong with it. As far as Niznick: he will also spend a fortune on marketing, mostly non-creative bashing of competitors. His only cost savings long-term will presumably be in not having as many reps, but this cost will also go up as more service is needed. People tend to forget that Niznick is in this just as much, or more, for the money than anybody else.

But again, the issues here are science, not business or marketing.

Keep up the thought provoking discussions!

6. *Biomet 3i* Says:
[April 30th, 2007 at 11:26 am](#)

Dear ManAlive:

Please show me who is spending \$400 for a Biomet 3i implant? You can't because we don't have any priced at that level. It is disingenuous to state something as fact when it is not. While Nobel and ITI do have expenses around 50% of sales, please understand this is for total expenses - not just marketing. Biomet 3i has expenses which are lower in absolute and percentage terms to our two biggest competitors. If you have financial data to show otherwise, please post.

7. *Arthur* Says:
[April 30th, 2007 at 12:49 pm](#)

Dear Mr. Biomet/3i

In the UK your implants cost about £260 each (price for 1 fixture). This equates to about \$520.

Yes folks that's \$520 per 3i implant in the UK.

Perhaps we in the UK are subsidising your prices across the pond?

8. *Dishearted* Says:
[April 30th, 2007 at 3:53 pm](#)

I personally do not mind paying the high price for implants as long as there is science tied behind it. ITI and ASTRA seem to be the only ones out there still doing the research. That is not my opinion either. Have you read the Merrill Lynch reports?

9. *burned before* Says:
[May 1st, 2007 at 10:43 am](#)

“All that is asked is before deciding based on a ranting post(s), review the material available. There are pre-clinical, clinical and human histology results available.”- Biomet 3i

Are these going to be consistent with the “pre-clinical, clinical and human histology studies” that were put out with the Tapered NT implant?

Also, If I have a failure rate in the high 30% again are you going to have someone call and tell me that “I don’t understand the difference between tapered and straight implants or will it be that I do not understand the idiosyncrasies between osseotite and nanotite surfaces this time.

10. *ManAlive* Says:
[May 1st, 2007 at 2:16 pm](#)

It would seem that Biomet/3i needs to spend way MORE than 50% on marketing etc as it appears to have quite a few p*ssed-off ex-customers.

I have been to the 3i factory and there is no way those implants cost more than a few \$’s to make.

If the money isn’t spent on marketing, then it obviously isn’t being spent at all. It’s pure profit!

11. *Wisdomtooth* Says:
[May 1st, 2007 at 8:28 pm](#)

There is a difference in placing a tapered implant. Failure to understand this will result in higher failures. Not everyone has them - I didn’t. 3i makes great implants, so do some other companies. The new Nanotite surface makes sense and I will use it. I am sure all implant companies run their businesses the same, much like there are similarities in the fees we charge and the costs we have to cover. I prefer to buy American when I can - cars, TVs..and my implants.

1. *Jerry Niznick* Says:
[May 2nd, 2007 at 3:44 am](#)

let me respond to the 3i rep’s claims of their research on osseotite and nanotite.

he states: using the proven osseotite surface as the control in many of the studies the comparative results are overwhelming.

comment: first you have to buy the false premise that the clinical reports on osseotite are “overwhelming” assuming he means favorable. the way these studies work is they ask 10 of their most experienced clinicians to report their results. no peer review controled, prospective studies. now of the 10, if 3 have less than their target % of success, they are not mentioned in any reports, leaving the 7 who all want to have good results so that 3i will invite them to speak at meetings and they can hold themselves out as experts. the bottom line is that the va study, which was multi-center, prospective, double blind and peer reviewed, did compare ha coated implants to acid etched implants with as much as 20% greater success in soft bone with ha (50u coating, not 4u sprinkles of ha.) the va study also compared results of experienced and inexperienced clinicians.... you do not see that with any other study. the results showed no difference in dense bone and no difference in soft bone with ha coated implants.

he states: they are actually far more compelling that many of the same study results done year’s back comparing osseotite to a machined surface and we all recognize the substantial impact that difference made in clinical outcomes.

comment: so here is how the game is played. they compare osseotite to smooth machined surface and claim better results. where are there studies comparing it to sla, tiunite, sbm, ha coating or any of the surfaces that have not been obsoleted.

he states: and before using this statement to bash osseotite, please consider that it is a very well accepted surface serving the needs of patients and clinicians alike for over ten years.

comment: so now history repeats itself... osseotite must be good because it is better than machined... nanotite must be good because it is better than osseotite. and of course osseotite is “very well accepted” so it must be good. the argument that osseotite must have been good because it “served the needs ... for 10 years” is specious because the same thing was said about machined branemark surface which was on the market for 20 years... about 15 years longer than it took for any discerning dentist to figure out the smooth surface did not work well in soft bone. those dentists who had failures with 3i’s nt implant may have avoided those failures if 3i had a rougher surface that could have helped overcome failures of initial stability that came from mismatches in the diameter of the drills and that of the implant.

nobel now compares tiunite to machined while straumann compares slactive to sla. i double dare either of these companies to compare torque values after 2 months to that of ha coated implants. i have two university studies done in the 1990’s that show bone attachment strength of ha increases with time whereas tps, sbm and machined surfaces stay the same... with machined being much lower than all the others. 3i wants you to beleive that spinkling a few microns of ha on etched smooth titanium is somehow better than 50 microns of an ha coating that has been tested with 1500 implants in the va study and about 800 implants in a

columbus university study, all with 96% + success after 5-8 yers. 3i's marketing literature says the reason nanotite is better is because when it resorbes it goes down from 4u to 1u but ha goes from 30u to 15u (i doubt they tested commercially used high crystalline ha). if ha is so good that 3i is sprinkling it on their implant, wouldn't you think they would prefer to have 15u left instead of 1u. their marketing people just don't understand the leap of logic in this marketing position

2. *EAD Says:*
[May 2nd, 2007 at 9:12 am](#)

As far as research goes, I would have to say that ITI & Nobel have the lion share. While some companies claim that the research matters to them, they clearly do not have anything to back their statements up. For example, I encourage everyone to look into the Astra website where they say that science matters, yet with less than 50 studies they are having a tough time convincing me of their scientific commitment. Companies like ITI & Nobel have thousands of studies on their implants. That is where our focus should be.

I've said it before. It is a shame that many of us hold marketing claims in higher regard than scientific studies. (by scientific studies I will echo Dr. Niznick...peer reviewed, independent studies)

3. *Wisdomtooth Says:*
[May 2nd, 2007 at 10:40 am](#)

Since Nobel and ITI are probably the two largest implant companies, it makes sense that they would have research - it is relative to some degree. 3i does produce a great deal of research and you must not be reading the same Journals as I do to not see research or articles documenting the clinical use of Osseotite. HA has it's merits. But does anyone know what amount is needed to create the chemical/biologic reaction to enhance early healing? Jerry, why do you feel more is necessarily better? Maybe, and data presented at a presentation given by Mike Block, showed the amount 3i uses does deliver the desired impact but without making the surface so rough as to hold bacteria if exposed or to delaminate. The theory and supporting research points to getting the full advantage of HA while eliminating the down side of using it as a complete coating. Jerry, please let us know where we can find research to support your new implants? Lastly, I don't think how you paint what Biomet 3i says is what was said. I think they are either number 2 or 3 in the world. That says something for Osseotite. Many of us use it day in and day out. Nothing works 100%, but it has established a track record of proven performance. To now have data to show how NanoTite compares to a proven surface when used as the control is compelling as Biomet 3i says.

4. *Albert OS Says:*
[May 2nd, 2007 at 3:13 pm](#)

Take a look at the annual reports from Nobel and Straumann. In 2006 Nobel spent 17.6m Euro on R&D or 2.9% of revenue. Straumann spent 18.7m Euro or 5.1% of revenues. Straumann invests way more.

Having just returned from the ITI World Symposium in New York I can tell you which horse I'm backing. Someone half-joked that, through ITI scholarships and research grants, they spend more on research with Nobel and 3i implants than Nobel and 3i do!!

(I am not paid by any company for my views)

5. [Jerry Niznick](#) Says:
[May 5th, 2007 at 10:55 pm](#)

RESPONSE TO QUESTION: Jerry, why do you feel more (HA) is necessarily better? Maybe, and data presented at a presentation given by Mike Block, showed the amount 3i uses does deliver the desired impact but without making the surface so rough as to hold bacteria if exposed or to delaminate. The theory and supporting research points to getting the full advantage of HA while eliminating the down side of using it as a complete coating.

NIZNICK: 3i's brochure shows that under increasing PH, Nanotite layer decreases from 4u to 1u or less whereas HA coating is shown on their chart to decrease from 30u to 15u. WHICH MEANS THAT COATING THE SURFACE WITH 30u WILL ASSURE YOU THAT AT LEAST 15u will remain. I am a pilot and a lesson I learned the hard way was that you never have too much fuel or too much altitude because things don't always go as planned. Another important difference is that HA coating is applied to a blasted surface such that if the HA were to disolve or delaminate you still have the same surface as provided on many uncoated surfaces (Implant Direct, BioHorizons, Lifecore, Zimmer - called SBM, RBM or MTS. On the other hand, when the few crystals of HA that only partially cover the osseotite surface, are rubbed off in insertion or dissolved with time (and we do not have any long-term experience to know how much time), you are left with the relatively smooth etched Osseotite surface that you were trying to improve with HA. THE EFFICACY OF NANOTITE FAILS ON SHEAR LOGIC ALONG.

STATEMENT: Lastly, I don't think how you paint what Biomet 3i says is what was said. I think they are either number 2 or 3 in the world. That says something for Osseotite. Many of us use it day in and day out. Nothing works 100%, but it has established a track record of proven performance. To now have data to show how NanoTite compares to a proven surface when used as the control is compelling as Biomet 3i says. NIZNICK; Biomet is #3 but Zimmer grew 24% last quarter and will overtake 3i if 3i's slow growth continues. The amount of sales of a product has a lot to do with its marketing and much less to do with its scientific efficacy. 3i enlisted the backing of well respected dentists like Dennis Tarnow and built a large sales force. There is nothing in its product line that I

would even want to clone, although I probably will make some compatible abutments. If you start out with the premiss that all titanium screw implants work and the ones with a medium rough surface work better than a smooth surface (etching blasting), then you get down to what really differentiates products today, simplicity, packaging, prosthetic options and cost.

6. [Jerry Niznick](#) Says:
[May 5th, 2007 at 11:16 pm](#)

Albert OS Says:

RESPONSE TO ALBER OS:

Take a look at the annual reports from Nobel and Straumann. In 2006 Nobel spent 17.6m Euro on R&D or 2.9% of revenue. Straumann spent 18.7m Euro or 5.1% of revenues. Straumann invests way more.

Actually the difference between \$18.7 and \$17.6 on “research” does not prove that Straumann spends “way more”. And who is to say that what they categorize as research in their financial reports is really research...it could be payments to clinicians for lecturing and supporting their products, grants to the ITI members for backing the company etc. Most studies are done to provide marketing support as none of the companies do the comparative studies to show if their new surface or design is as good or better than any of the other surfaces or designs on the market. Why hasn't Straumann done a side-by-side animal study comparing removal torque and BIC after 1-2 months ofr its SLActive vs TiUnite, or Astra do a study comparing Osseospeed to Osseotite? My VA study in the early 1990's compared etched to HA, Alloy to Pure, Cylinder to Basket to Screw designs and it was done in a way where I, the manufacturer could not influence the results because I didn't see them until they were published. That is the perpose of peer reviewed studies

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Staumann's marketing is dependent on the ITI group and those guys don't come cheap. First these brilliant guys broght TPS to the crest of the bone, a surface that is worse than HA if it gets exposed. Then they only made 1-stage implants with 2mm polished necks... which usually ended up sub-crestal in esthetic areas encouraging bone loss. Now finally they are coming out with a 2-stage implant, when most of the time the ITI implant was treated like a two-stage implant in the esthetic zone by placing it flush with the crest of the bone and adding a healing collar.

7. [Albert OS](#) Says:
[May 6th, 2007 at 4:50 pm](#)

Again, Dr Niznick, your unbending commitment to criticizing innovations that aren't yours never fails to astonish me.

8. [Jerry Niznick](#) Says: *Your comment is awaiting moderation.*
[May 9th, 2007 at 8:04 am](#)

What "innovation" are you talking about. Straumann has no study, even after spending \$18M, that shows any clinically significant advantage to using its SLActive surface vs its SLA surface. They will earn their entire research budget back just on the \$50 difference they charge between the two surfaces, based on a few animal studies that show an earlier shift of about 1.5 weeks in the lowest point of torque removal. With implants being loaded immediately if 35Ncm of torque can be achieved at insertion, which is very achievable in Type 1 and Type 2 bone, shortening the healing time from 6-8 weeks to 3-4 weeks would be of absolutely no significance because overloading would become apparent within a week of immediate loading. What is significant is using an implant design (evenly tapered) in combination with a surgical protocol (undersized socket) to create an increase of insertion torque in soft bone so that more implants can be immediately loaded. That was my innovation with the development of the Tapered Screw-Vent inserted with straight step-drills. A recent article (April 2006 COIR Shalabi) confirmed that compressing soft bone at insertion increased initial stability, torque removal and bone contact. If Straumann wants to prove its SLActive surface is worth the \$50 more, let it do a simple animal study comparing that surface with TiUnite, Osseospeed, SBM and HA, all on their implant body, and then repeat the study comparing SLActive on their body and surgical protocol to SBM and HA on the Tapered Screw-Vent from Zimmer or the Tapered ScrewPlant from Implant Direct using the soft bone protocol with straight step drills used with both of these implants. Companies Like Straumann control the studies so that the results of studies they fund are designed to yield positive results - that is why they do not fund comparative studies with competitor's products.