

Orthopedics This Week

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For all news that is ortho, read on.



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Orthopedic Power Rankings

Robin Young's Entirely Subjective Ordering of Public Orthopedic Companies

THIS WEEK: Two broken stocks, but not broken companies—Integra LifeSciences and Bioventus— had great months, both companies are worth 24-26% more today, yet remain among the least expensive (based on P/E, PSR and PEG) equities in orthopedics. We're nearing mid-year mark of the 3rd year since COVID and sales growth overall is coming in about 100 basis points above expectations. Profit margins are not where they were 5 years ago but cash flows remain among the strongest of any industry. These Power Rankings are based on buying quality at bargain prices. Here are 10 top quality companies, with excellent managements and brands, that, for various short term reasons, happen to be priced below their inherent values.

RANK	LAST WEEK	COMPANY	TTM OP MARGIN	30-DAY PRICE CHANGE	COMMENT
1	1	Pacira Biosciences	9.05%	(3.64%)	Just raised \$250 million with a 2.125% convertible note. Wall Street expects PCRX will report \$171 million for Q2 sales, roughly flat with last year. But higher profit margins.
2	2	Smith & Nephew	14.46	5.36	SNN, being a London-based company, reports 2x a year and at mid-2024, analysts are looking for 3% sales growth to \$2.8 billion and operating profit margins around 16%.
3	9	Integra LifeSciences	10.98	23.65	Value buyers jumped on IART in the last month, as they should. For Q2, consensus is 10% sales growth YOY which represents recovering from last year's production issues.
4	10	Bioventus	4.34	25.60	BVS is still recovering but under new CEO Claypoole is finding its feet and value buyers like what they see. Q2 will likely be flat sales-wise, but stronger balance sheet and cash flow.
5	6	ConMed	9.63	10.10	Third least expensive orthopedic equity with the 5th best performance. For Q2, the 8 analysts who cover CNMD expect sales will be 8.60% higher than last year and earnings will also beat.
6	3	Globus Medical	13.71	5.49	One measure of how Globus's culture is infusing the former NuVasive is operating profit margin. It's steadily rising. For Q2, sales will likely come in around \$615 million, with a 14% operating profit.
7	4	Medtronic	19.17	3.09	Just raised €3 billion in the form of Euro-based debt. Sifting through MDT's press, very little mention of Spine. #1 supplier of spine products not getting top management love?
8	8	Zimmer Biomet	20.78	(6.21)	Odd, stock is down 6%, but operating profit margins are up, now nearly 21% of sales and for Q2, the consensus of 23 analysts is that sales will rise 6.40% to \$1.94 billion!
9	5	Orthofix	(16.17)	(9.95)	Great hire at OFIX, Max Reinhardt is the new President of Global Spine. The team is being assembled. For Q2, look for \$195 million in sales, up 4.40% and a reported loss of around \$0.19 per share.
10	NR	Medacta	13.00	12.34	Back on the Power Rankings after a long absence. Swiss-based Medacta, on about \$500 million in annual sales, generates a 16% return on equity and 13% operating profit margins. Great quality.

Robin Young's Orthopedic Universe

TOP PERFORMERS LAST 30 DAYS

	COMPANY	SYMBOL	PRICE	MKT CAP	30-DAY CHG
1	Bioventus	BVS	\$6.33	\$504	25.60%
2	Integra LifeSciences	IART	\$30.80	\$2,427	23.65%
3	AxoGen	AXGN	\$6.97	\$305	18.74%
4	Medacta	MOVE	\$142.83	\$2,857	12.34%
5	ConMed	CNMD	\$76.41	\$2,353	10.10%
6	Stryker	SYK	\$349.33	\$133,077	6.09%
7	Globus Medical	GMED	\$65.12	\$8,795	5.49%
8	Smith & Nephew	SNN	\$26.34	\$11,515	5.36%
9	ZimVie	ZIMV	\$16.17	\$441	5.14%
10	Medtronic	MDT	\$84.07	\$111,881	3.09%

WORST PERFORMERS LAST 30 DAYS

	COMPANY	SYMBOL	PRICE	MKT CAP	30-DAY CHG
1	SINTX Technologies	SINT	\$5.15	\$3	-42.00%
2	Dynatronics Corp	DYNT	\$0.39	\$2	-18.98%
3	Xtant Medical Hldgs	XTNT	\$0.72	\$93	-12.41%
4	SI-BONE, Inc	SIBN	\$13.28	\$547	-11.47%
5	Orthofix	OFIX	\$13.42	\$504	-9.93%
6	Anika Therapeutics	ANIK	\$25.79	\$382	-9.41%
7	OrthoPediatrics Corp	KIDS	\$30.16	\$719	-9.10%
8	Nevro Corp	NVRO	\$9.27	\$340	-8.76%
9	Aurora Spine	ASG.V	\$0.19	\$15	-8.58%
10	MicroPort Scientific	0853	\$0.77	\$1,421	-7.30%

LOWEST PRICE / EARNINGS RATIO (TTM)

	COMPANY	SYMBOL	PRICE	MKT CAP	P/E
1	Johnson & Johnson	JNJ	\$147.08	\$353,974	19.10
2	Medtronic	MDT	\$84.07	\$111,881	20.46
3	Pacira Biosciences	PCRX	\$28.57	\$1,330	23.26
4	Zimmer Biomet	ZBH	\$113.34	\$23,317	26.21
5	ConMed	CNMD	\$76.41	\$2,353	28.91

HIGHEST PRICE / EARNINGS RATIO (TTM)

	COMPANY	SYMBOL	PRICE	MKT CAP	P/E
1	Xtant Medical Hldgs	XTNT	\$0.72	\$93	141.64
2	Globus Medical	GMED	\$65.12	\$8,795	56.74
3	Medacta	MOVE	\$142.83	\$2,857	55.71
4	Smith & Nephew	SNN	\$26.34	\$11,515	43.78
5	Stryker	SYK	\$349.33	\$133,077	36.14

LOWEST P/E TO GROWTH RATIO (EARNINGS ESTIMATES)

	COMPANY	SYMBOL	PRICE	MKT CAP	PEG
1	Smith & Nephew	SNN	\$26.34	\$11,515	-5.47
2	ConMed	CNMD	\$76.41	\$2,353	1.18
3	Medacta	MOVE	\$142.83	\$2,857	2.00
4	Pacira Biosciences	PCRX	\$28.57	\$1,330	2.40
5	Stryker	SYK	\$349.33	\$133,077	3.25

HIGHEST P/E TO GROWTH RATIO (EARNINGS ESTIMATES)

	COMPANY	SYMBOL	PRICE	MKT CAP	PEG
1	Xtant Medical Hldgs	XTNT	\$0.72	\$93	7.08
2	Integra LifeSciences	IART	\$30.80	\$2,427	5.69
3	Medtronic	MDT	\$84.07	\$111,881	4.65
4	Zimmer Biomet	ZBH	\$113.34	\$23,317	3.79
5	Johnson & Johnson	JNJ	\$147.08	\$353,974	3.67

LOWEST PRICE TO SALES RATIO (TTM)

	COMPANY	SYMBOL	PRICE	MKT CAP	PSR
1	Dynatronics Corp	DYNT	\$0.39	\$2	0.05
2	Orthofix	OFIX	\$13.42	\$504	0.67
3	Aurora Spine	ASG.V	\$0.19	\$15	0.75
4	Nevro Corp	NVRO	\$9.27	\$340	0.80
5	ZimVie	ZIMV	\$16.17	\$441	0.96

HIGHEST PRICE TO SALES RATIO (TTM)

	COMPANY	SYMBOL	PRICE	MKT CAP	PSR
1	Stryker	SYK	\$349.33	\$133,077	6.49
2	Globus Medical	GMED	\$65.12	\$8,795	5.61
3	Medacta	MOVE	\$142.83	\$2,857	5.59
4	OrthoPediatrics Corp	KIDS	\$30.16	\$719	4.83
5	Johnson & Johnson	JNJ	\$147.08	\$353,974	4.16

PSR: Aggregate current market capitalization divided by aggregate sales and the calculation excluded the companies for which sales figures are not available.

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Robin Young | robin@ryortho.com



FDA Clears 99.99% Zero Bacteria Implant Coating

BY ROBIN YOUNG



Courtesy of Orthobond Corporation

With this latest FDA decision, the era of, literally, 99.99% zero bacterial contamination on any musculoskeletal implant is beginning.

This new technology, which Princeton, New Jersey's Orthobond Corporation is bringing to market, is a covalently bound antibacterial surface technology with broad applications and implications for any musculoskeletal (and spine) implant.

To be clear, this technology is a non-eluting coating that *actively* kills bacteria on any implant surface.

FDA Grants De Novo Marketing Approval

The FDA's decision to grant a De Novo marketing request from Orthobond for

its Ostaguard™ antibacterial surface treatment came in early April 2024.

It was the first time the FDA had granted a De Novo submission for a non-eluting coating designed to actively kill bacteria that contaminate the surface of a medical device. The first application will be for orthopedic spinal implants.

Bacterial contamination has been shown to be a major contributing factor behind failed joint implants. Despite everyone's best efforts, operating rooms and surgical suites have been unable to ensure 100% bacteria free implants. According to the National Institutes of Health (NIH), numerous studies have shown that [between 70-100%](#) of explanted hardware from failed joint implants have some level of contamination from different sources.

Testing

Orthobond technology covalently bonds an antibacterial molecule to the surface of implants. It was tested on numerous surfaces against 12 microbes representing nearly all cases of device-related infections. Those tests conclusively showed that particular surface coating actively killed multiple strains of bacteria that come into contact with an implant at any point from manufacturing to implant.

Orthobond's proprietary surface technology is designed to integrate into any manufacturing process and is applied prior to packaging and sterilization.

Huge Milestone for Surgeons and Patients

"We are proud of our evidence-based submission to the FDA and

look forward to making our innovative technology available to a wide variety of customers. We believe our surface coating has the potential to be the standard of care for implantable devices to protect patients from pathogens, and that this will be transformative to the field of surgery and beyond,” said David Nichols, CEO of Orthobond.

“This marks a huge moment in the history of Orthobond and brings to fruition the vision of our co-founders, Gregory Lutz, M.D. and Jeffrey Schwartz, Ph.D., who were committed to helping patients and physicians by providing a much needed

and easy-to-implement antibacterial option to protect implants. This milestone also provides further testament to Gregory’s legacy and we are proud to be able to carry it on into this next chapter.”

Currently, Orthobond has a number of devices treated with the technology in various stages of the regulatory process. Ostaguard is specifically designed to be applied to numerous surfaces, including joint reconstruction, neuromodulation, oncology, sports medicine, plastic surgery, cardiovascular, and can even be used for non-medical antibacterial purposes such as in textiles and consumer products.

About Orthobond

Orthobond Corporation is a surface technology company that has developed proprietary antibacterial surfaces, with broad applications in the medical device industry and more such as commercial, industrial, automotive, and beyond. Orthobond is the first company to utilize surface modifications that can be permanently bound to any surface, killing bacteria by mechanically rupturing pathogens without using eluting antibiotics.

For more information: Here is a [video](#) about Orthobond and its remarkable, groundbreaking technology. ♦

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Journal of Arthroplasty Best Practices for TJA Wound Closure

BY ELIZABETH HOFHEINZ, M.P.H., M.ED.

Two new studies published in *The Journal of Arthroplasty* provide best practice approaches and insights for wound closure and dressing management in total knee arthroplasty (TKA) and total hip arthroplasty (THA).

“The biggest problem that we have in terms of revisions or morbidity following total knee and total hip arthroplasty is infection, and approximately half of the infections are attributable to wound healing problems,” said Michael A. Mont, M.D., Rubin Institute for Advanced Orthopedics and study co-author. “With the consensus reached by the participating orthopedic surgeons, we now have a guide that may help reduce the variability between surgeons and centers, promote standardization, and improve outcomes for patients after knee and hip replacements.”

TKA Study

Dr. Mont told *OTW*, “The most devastating complication of TKA is a deep infection, which still occurs 1 to 2% of the time for primary procedures and is much higher for revisions. Issues with the wound can account for approximately 50% of these infections, so the importance of this topic cannot be overestimated.”

“Unfortunately, there are countless approaches to wound healing techniques for TKA, which are confounded by the fact that there are no true standards of care in this field. These standards have been mostly derived without Level 1 evidence and few sys-



Hip arthroplasty wound closure / Source: Shutterstock

tematic reviews. Therefore, a scientific, evidence-based approach is really needed.”

“In addition, different aspects of wound healing with TKA are not well-defined. For example, I typically divide the procedure closure into four parts: the deep fascia, the more superficial layer, then the skin and subcutaneous layer, followed by the dressing.”

“All of these are differently described in many studies; investigators have combined some of these different layers, and it is hard to further differentiate best practices for each layer. There is also a large diversity of patients who we treat; for example, obese patients, ones who smoke, ones that have many comorbidities, as well as patients who need a revision knee arthroplasty, which are more complicated.”

The researchers used a Delphi process to prioritize best practices. Mont explained, “For important and relevant medical issues, it is mandated that evidence-based approaches be used to make care decisions, especially in this era of healthcare reform with an increasing downward-pressure on reimbursement.”

“Consensus conferences, according to Delphi methods, have been increasingly utilized to get ‘answers’ to clinically important questions throughout medicine. These types of consensus efforts can also identify important gaps in the existing evidence that require further research, which are parts of two future publications as well.”

“The Delphi method is an iterative process that collects opinions from a panel of experts to achieve consensus in a

given subject area. The method involves a series of structured consensus-building rounds in which responses are collected through anonymous polling. The results of each round are quantitatively and/or qualitatively summarized and shared with the panelists. This process is then repeated until consensus is reached.”

“In this case, 75% of the 20 panel members from a group of orthopedic experts from the United States, Europe, and Canada reached agreement after three rounds on 40 questions pertinent to total hip and knee arthroplasty.”

Dr. Mont told *OTW* that the most actionable findings from the TKA study were:

- “Barbed sutures were superior to non-barbed sutures based on lower wound complications, better cosmetic appearances, shorter closing times, and overall cost savings.

- Mesh-adhesives were superior to other skin closure methods due to lower wound complications, higher patient satisfaction scores, and lower rates of readmission.
- Silver-impregnated dressings were superior to standard dressings because of lower wound complications, decreased infections, and fewer dressing changes.
- Negative pressure wound therapy was superior to other dressings for high-risk patients due to lower wound complications, decreased reoperations, and fewer dressing changes.”

THA Study

“Similar to the knee arthroplasty study, there was a paucity of data to recommend on many different aspects of wound care after total hip arthroplas-

ties,” Dr. Mont told *OTW*. “In fact, there is much less data than TKA in terms of the published literature on many of the different questions. This means there are multiple evidence gaps prevalent for this procedure.”

“Fortunately, many of the take-home messages that were obtained from the TKA Delphi process could be applied to THA. This is in the same manner that many take-home messages from other specialties can be applied to total hip and total knee arthroplasty.”

“For example, the use of sutures that have an antimicrobial-impregnated agent, namely triclosan, has been shown to reduce infections in many other surgical specialties. Therefore, the panelists do not necessarily believe that specific studies dealing with triclosan need to be repeated for total knee and total hip arthroplasty

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Moderator:
ROBIN YOUNG

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because of the success of these sutures in the other specialties.”

“Likewise, with much data on many topics about barbed sutures and mesh adhesives after total knee arthroplasty, for example, much of the conclusions for the knee can be applied to the hip.”

“There were a number of nuanced issues that dealt with wound healing for both total knee and total hip arthroplasty. For example, for total knee arthroplasty, the group opined on the advantages of closing in semi-flexion over extension to lead to superior range of motion. They also found that aspirin for venous thromboembolism prophylaxis reduces wound complications.”

“For THA, some of the more specific topics included the best approaches

(anterior versus posterior), drain use, and the best method of DVT [deep vein thrombosis] prophylaxis.”

Dr. Mont noted that the most important and actionable findings from the Delphi panel for THA included the following:

- “Barbed sutures were superior to non-barbed sutures in terms of shorter closing times and overall cost savings.
- Subcuticular sutures were superior to skin staples based on lower risk of superficial infections and higher patient preferences, though there were longer closing times.
- Mesh adhesives were superior to silver-impregnated dressings with a lower rate of wound complications.

- For at-risk patients, the use of negative pressure wound therapy was superior to other dressings because of lower wound complications and reoperations, as well as fewer dressing changes.”

“The panel of experts identified key interventions in both TKA and THA that are most focused on patient safety and improved outcomes, including the use of barbed sutures over non-barbed sutures; the use of triclosan-coated sutures over non-antimicrobial-coated sutures; and the application of mesh adhesives over other skin closure methods. As discussed in the review by the panel, these interventions were preferred as they have been associated with lower rates of wound complications, lower risk of surgical site infections, and lower rates of readmission.” ♦

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New Ortho Healthcare Venture Fund

BY KIM DELMONICO

Two organizations have come together to form a new healthcare venture fund dedicated to orthopedic healthcare technology solutions.

The Orizon Fund has been newly founded by Orizon LLC and the Orthopaedic Research and Education Foundation (OREF). Its focus will go towards solutions created by OREF-funded research. The fund will provide a broad range of financial support to these efforts.

Funding will be used to enable the creation and operation of new companies dedicated to bringing new solutions to market. The capital may also be used, per the press release, for “providing support in general management, product development, regulatory and quality assurance practices, and healthcare reimbursement guidance where appropriate.”

In the press release, OREF President Joshua J. Jacobs, M.D. commented, “The partnership with Orizon LLC represents an exciting new way for OREF to achieve its mission of supporting investigators and funding innovative musculoskeletal research. OREF’s goal is to improve patient care by funding research into novel solutions to current clinical problems. By assisting OREF-funded researchers in getting those solutions to market and into the hands of orthopaedic surgeons in an effective and efficient fashion, we can further leverage the generous support provided by OREF donors to improve clinical practice.”

Dr. Jacobs continued, “Supporting innovative research is at the core of OREF’s mission, and assisting our grantees in taking the next step with their research



Source: Orizon LLC and the Orthopaedic Research and Education Foundation (OREF)

advancements is a natural extension of our mission.”

The funding process will include a selection and evaluation process. Per the press release, the selection process will focus on “innovation that addresses unmet clinical needs and provides features distinguished in the marketplace.”

Orizon LLC will select individuals who have completed OREF research grants to advance through a competitive process. If a solution is selected, a new standalone subsidiary of Orizon LLC will be created with dedicated resources to drive product development plans for a commercially viable solution.

OTW spoke with Lee Grossman, OREF’s chief executive officer, about the fund. Grossman told us, “OREF’s mission is to improve patient care by funding research that drives improvements in clinical practice. With the launch of Orizon, OREF can further support these improvements by connecting our grant recipients with the resources needed to move innovative solutions out of the lab and into the hands of orthopaedic surgeons.”

He also noted, “while the Orizon Accelerator program is launching to a subset of OREF grant recipients with completed grants, all OREF-funded investigators are invited to attend a Town Hall information session to learn more about the program.”

OREF representatives clarified that “The Orizon partnership is designed to assist investigators in commercializing solutions resulting from OREF-funded research. Initially, a subset of OREF grant recipients whose grants have been completed will be invited to learn more about Orizon and to apply to participate in the Orizon Accelerator program. The first cohort of participants will be selected from among these investigators. Future cohorts will be selected from a broader pool of OREF-funded investigators. All OREF grant recipients are welcome to attend a virtual Town Hall meeting to learn more about the program. More information is available on the [Orizon website](#).

Orizon hopes to select the first cohort of recipients “by mid-July with the goal of announcing funding decisions by mid-September.” ♦

LEGAL

Ortho Surgeon Receives 16 Month Prison Sentence

What is the sentence for 10 counts of health care fraud?

If you are orthopedic surgeon Olarewaju James Oladipo, M.D., the sentence is 16 months in prison followed by an additional one year of supervised release.

U.S. District Court Judge Allison D. Burroughs issued the sentence to the Massachusetts-based surgeon following his December 2023 conviction by a federal jury. For OTW's original coverage of the health care fraud case, see "[Orthopedic Surgeon Convicted in Opioid Health Care Fraud Case.](#)"



Source: Unsplash and Matthew Ansley

Dr. Oladipo's conviction comes after a nearly four-year long health care fraud scheme, during which he was also one of the top opioid prescribers in Massachusetts. The scheme to falsely billed for patient visits by using billing codes for more expensive procedures that were not actually provided ran from January 2016 through December 2019.

According to the Department of Justice (DOJ) press release, during that four-year period, Dr. Oladipo "frequently billed for more than 60 patients per day and sometimes more than 100 patients per day." If Dr. Oladipo was seeing that number of patients, then the visits "could have only lasted five minutes or less." However, Dr. Oladipo's billing

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codes tended to correspond to visits that were much longer durations, even as long as 45 minutes.

How could Dr. Oladipo ensure that patients would continue to frequent his practice? According to the DOJ, “Dr. Oladipo ensured this high flow of patients to his practice by prescribing powerful, highly addictive opioids at a rate that made him one of the top prescribers of such drugs in Massachusetts.”

The sentence is based upon the U.S. Sentencing Guidelines and related statutes. However, the 16-month prison sentence is not the maximum sentence. According to a previous Department of Justice press release, the charges of health care fraud and conspiracy to commit health care fraud “each provide for a sentence of up to 10 years in prison, one year of supervised release and a fine of up to \$250,000.” — *KD*

FDA Clears Award Winning Lumbar Facet Device

The U.S. Food and Drug Administration (FDA) has granted 510(k) clearance to a lumbar facet device which was a 2023 Best Technology in Spine award winner. The manufacturer is SC

Medica, and the device brand name is SC Medica FFX®.

The novel facet fixation system is for use in lumbar spinal fusion surgery. According to the FDA’s 510(k) summary document, the device is “placed bilaterally through a posterior surgical approach and spans the facet interspace.” It must be used with “an FDA-



FFX® / Source: SC Medica



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cleared transfacet screw cleared for use in the lumbar spine.”

The device is intended to “provide temporary fixation and stabilization to the spine as an aid to lumbar fusion through bilateral immobilization of the facet joints at one or two levels with autogenous and/or allogenic bone graft.”

It must be accompanied by “an FDA-cleared intervertebral body fusion device and/or with an FDA-cleared posterior lumbar pedicle screw and rod system implanted at the same spinal level(s) as an adjunct to a single or two-level intervertebral body or posterolateral fusion, respectively.”

The device is indicated for the “treatment of patients with lumbar degenerative disc disease (DDD) from L3 to S1 in skeletally mature patients who have failed conservative care.”

A device must be substantially equivalent to a predicate device to qualify for shorter and earlier 510(k) clearance. According to the 510(k) summary document the lumbar facet device is substantially equivalent in indications, design principles, and performance to the PMT Facet Fixation System, Lumbar and the SurGenTec Ion Facet Screw System.

SC Medica, a company focused on facet fixation solutions based in Strasbourg, France, submitted the device for 510(k) clearance. The device is the SC Medica FFX®.

OTW spoke with SC Medica CEO and Founder Camille Srour, Ph.D. about the device. He commented, “With over 10,000 implantations to date, the FFX device is currently the most widely used lumbar facet cage on the market. We are thrilled that U.S. patients can now benefit from this unique, minimally invasive technology.” — KD

Hospital Groups & Surgeon Pay to Settle False Claims Allegations

Retired orthopedic surgeon Kevin Schoenfelder, M.D., CHI Franciscan Health, and St. Joseph Medical Center have agreed to pay to settle False Claims Act allegations.

In accordance with the settlement, Dr. Schoenfelder will pay \$197,054. The payments settle allegations against Dr. Schoenfelder for purportedly performing medically unnecessary spinal surgeries. In 2018, Dr. Schoenfelder retired as a physician and in 2019 he surrendered his physician license.

CHI Franciscan Health and St. Joseph Medical Center will pay \$745,654. The payments resolve claims that, per the Department of Justice press release, CHI Franciscan Health “billed for Dr. Schoenfelder’s performance of spinal surgery at more spinal levels than necessary and medically unnecessary spinal fusions at Tacoma’s St. Joseph Hospital.”

In the press release, U.S. Attorney Tessa M. Gorman commented, “Unnecessary surgeries put patients at risk of medical complications.”

Gorman continued, “In this case we are concerned about protecting taxpayer funded health care, but even more concerned that patients may have needlessly suffered when enduring procedures that were more invasive than was necessary.”

The settlement is the result of a *qui tam* lawsuit filed by another physician in 2018. The physician relator alleged that Dr. Schoenfelder, a board certified orthopedic spine surgeon based in Tacoma, Washington, had been performing medically unnecessary spinal surgeries. He alleged that over a period of five years the medically unnecessary surgeries were billed to government health care programs including Medicare, TRICARE, and Veterans Affairs.

In the original complaint, the physician relator claimed that two types of fraud were being perpetrated in the alleged scheme. According to the complaint, the first type of alleged fraud was “falsely billing one type of procedure as a more expensive type of procedure.”



Source: Unsplash and Piron Guillaume

The second type of alleged fraud was “performing and billing for medically unnecessary procedures.” In support of the allegations the physician relator claimed that Dr. Schoenfelder would falsely bill for a “redo discectomy” when he actually performed a “redo laminectomy.” The physician relator also claimed that Dr. Schoenfelder would perform surgical decompressions that were more extensive than necessary in order to generate more revenue.

While the payments resolve the case, none of the parties are admitting to wrongdoing. According to the Department of Justice press release, “each is paying the government health programs the amount that was improperly billed and additional penalties.” The physician relator who brought the original lawsuit will receive 22% of the payments. — KD

SPINE

Do Spine Surgeons Follow Infection Avoidance Guidelines?

What are the guidelines? And does lack of knowledge of the guidelines affect SSI rates?

Eleven years ago, 2013, the first of what would be 10 different Best Practice Guidelines regarding surgical site infections (SSI) following pediatric deformity surgery was issued to the broader

spine surgery community in the U.S. and Europe.

While rates of SSI in spine surgery have decreased in the ensuing decade, in 2022 surgeons from the Harms Study Group and the Pediatric Spine



Source: Project for Safety in Spine Surgery

Ask Lisa

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LISA FERRARA, PHD

Moderator: **ROBIN YOUNG**

SEPT 2024

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Study Group decided to update these guidelines to incorporate the most recent evidence and experience. The newly updated guidelines also include guidance on factors associated with increased SSI risk.

At the same time, Michael Vitale, M.D., M.P.H., founder of the Project for Safety in Spine Surgery, and his group of co-authors asked the important question—how well do spine surgeons comply with these multiple sets of SSI avoidance guidelines?

Vitale and his research team collected SSI guideline compliance data from surgeons in both North America and Europe and published those results; [“Evaluating compliance with the 2013 best practice guidelines for preventing surgical site infection in high-risk pedi-](#)

[atric spine surgery,”](#) in the January 2024 edition of *Spine Deformity*.

What did they find? The research group reported surprisingly high rates of compliance to these guidelines in the ensuing decade. “Our systematic review looked at 77 studies and found that neuromuscular issues, revision, longer cases, and having a comorbidity were risk factors for SSI following these procedures,” recalls Dr. Vitale, “To standardize these practices, we need a better understanding of the role of pre-operative nutrition, and we need to determine if indeed a urine culture is always helpful.”

Towards that end, Dr. Vitale and his team anonymously surveyed 142 North American and European surgeons, authors and non-authors and

members of various spine study groups on their adherence to best practice guidelines.

Reported Dr. Vitale to *OTW*: “We found that 73.7% reported high or perfect compliance.”

“While there was generally high compliance overall,” Dr. Vitale told *OTW*, “we found that North American surgeons, authors of the best practice guidelines and those aware of the guidelines had increased compliance. Things not associated with compliance were participation in a spine study group, years in practice, and yearly caseload.”

“I was a bit surprised at the weak correlation between best practice guidelines awareness and compliance, as well as the lack of correlation between years in prac-

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tice and yearly caseload with compliance. To me this means that people are coalescing around the right things to do.”

“This year, an expert working group is well underway with a Best Practice Guideline looking at ways to optimize safety in robotic spine surgery with some 55 potential issues being examined. Come to SSS 2024 to get a sneak peek!”

The 9th Annual Safety in Spine Surgery Summit is around the corner, taking place on May 31, 2024, at The Heart Conference Center/New York-Presbyterian Hospital. According to Course Chair Michael Vitale, M.D., M.P.H., this year’s event will highlight new research and focus on robotics and enabling technologies.

To learn more about the 9th Annual Safety in Spine Surgery Summit, please visit: <https://safetyinspinesurgery.com> — EH

PEOPLE

James I. Huddleston, III, M.D. New AAHKS President

James I. “Hutch” Huddleston III, M.D., adult reconstruction division director and professor of orthopedic surgery at the Stanford University School of Medicine, has taken office as the 34th President of the American Association of Hip and Knee Surgeons (AAHKS).

After completing his undergraduate studies at Yale University and medical school at the University of Vermont, Dr. Huddleston completed the Harvard Combined Orthopaedic Residency Program and fellowship in adult reconstruction at Massachusetts General Hospital.



Dr. Javad Parvizi welcomes James I. “Hutch” Huddleston, III, M.D. as AAHKS President / Source: American Association of Hip and Knee Surgeons

Dr. Huddleston has served as chair of the California Joint Replacement Registry and is currently chair of the Steering Committee for the American Joint Replacement Registry. Dr. Huddleston also consults for the Yale Center for Out-



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comes Research/Centers for Medicare and Medicaid Services (CMS) on issues related to hip and knee arthroplasty.

“I am excited to say that I have the best job in the world,” Dr. Huddleston told *OTW*.

“I am tremendously honored to serve as the 34th AAHKS president. At AAHKS I have the pleasure of working with incredibly talented and passionate colleagues. I am very, very nervous about the future of healthcare in our country.”

“My father, a retired orthopaedic surgeon, discouraged me from becoming a doctor due to his perceived decay of the industry. Despite him being spot-on, I obviously didn’t listen. Now my children want to be doctors.”

“Our younger colleagues are struggling to keep their lights on at the

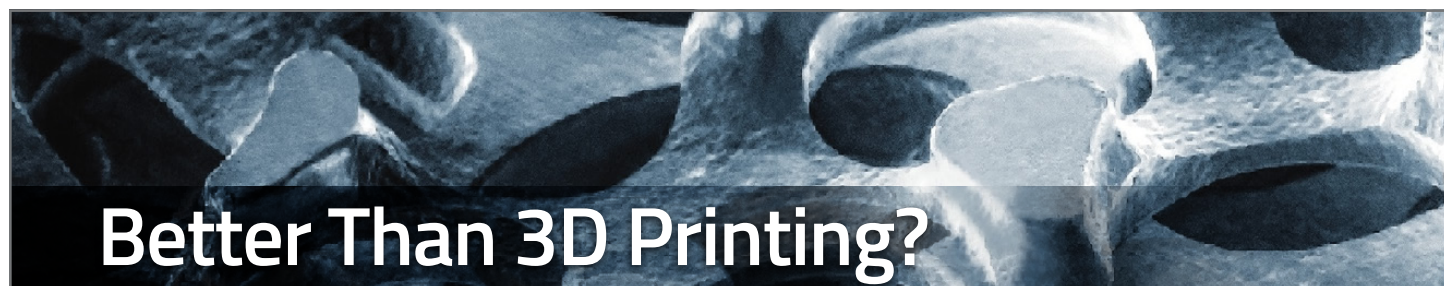
office. Despite the many obstacles we face, I am compelled to improve our healthcare system here in the United States. Declining physician reimbursement that doesn’t even come close to keeping pace with inflation, loss of physician autonomy, and market consolidation are just a few of the threats that are undermining physicians’ ability to provide high-value care for our patients.”

When *OTW* asked what his experience with joint replacement registries taught him, Dr. Huddleston commented, “I have had the good fortune of being involved in local, regional, and national registry efforts for nearly 20 years. My interest in registries stems from two of my mentors, William H. Harris, M.D. and Henrik Malchau, M.D., Ph.D. They always stressed the need to follow

one’s patients. Aligning the stakeholders in healthcare—patients, surgeons, payors, hospitals, and our industry partners—will always be a challenge.”

Dr. Huddleston has served as an Abstract Reviewer for AAHKS, and as a member and chair of the Advocacy Committee and the Health Policy Council. As such, he worked on payment issues and advocated for the profession in Washington, DC with CMS and Congress. Dr. Huddleston was also awarded the AAHKS Presidential Award in 2020.

“Having worked at an academic institution for my entire career, I have a keen understanding of the opportunities to improve the value of care we deliver. Longitudinal follow-up of our patients is mandatory to deliver the highest value care, especially in hip and knee arthroplasty.”



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“I am pleased to report that we have reached an inflection point at the American Joint Replacement Registry. While the American Joint Replacement Registry has approximately 40% of all the hip and knee replacements performed in the United States annually, we need to continue our efforts to get towards 100% coverage and improve data completeness.”

“Like other successful national registries, we will need federal assistance to scale this effort. I am focused on synergizing our efforts with AAHKS and the American Academy of Orthopaedic Surgeons [AAOS] to make this dream become a reality.”

“As president of AAHKS, my primary job is to assure that AAHKS’ resources are deployed properly to promote excellence in hip and knee care. In addition

to our usual efforts aimed at achieving our long-term strategic goals focused on education, research, and advocacy, I will focus on educating our membership about unionization, exploring the establishment of centers of excellence for periprosthetic joint infection, and securing adequate long-term funding to scale the American Joint Replacement Registry.”

“We will also continue our tireless efforts, in conjunction with AAOS, to achieve long-term Medicare payment reform. We will continue to work to increase our membership and attendance at our annual meeting which will be held November 7-10, 2024, at the Gaylord Texan Resort in Dallas, Texas. We are targeting the Middle East, our allied health professionals, and other healthcare stakeholders in these efforts.” — EH

1.8 Million-Procedure Outcomes Study Reveals All Stars

Boston, Massachusetts-based Avant-garde Health, a company focused on enhancing quality and profitability across the spectrum of care, announced



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that their analysis of 1.8 million procedures demonstrates that top researchers consistently achieve better patient outcomes compared to their peers.

In what was dubbed the “Healthcare Research All-Stars Initiative,” Avant-garde identified the top 5% of physician researchers across a wide range of surgical specialties.

The team first identified physicians by specialty, then assessed Medicare procedural volume and facility Medicare claims data. To be included in the Research All-Stars a hospital must have had at least one eligible surgeon during 2021-2022. The team then decided which surgeons to attribute to which hospitals, compiled peer-reviewed publications, calculated publication weights, and created a weighted publication score.

Avant-garde Health reviewed 2021-2022 Medicare Fee-for-Service data from the Centers for Medicare and Medicaid Services. All research appeared on PubMed and was weighted using Journal Impact Factor and author position.

The result? Patients treated by top surgeon-researchers showed a 5% lower rate of post-discharge complications and a 5% lower rate of mortality within 30 days after discharge.

“The findings clearly show that being a better researcher is associated with being a better clinician,” said Derek Haas, CEO of Avant-garde Health. “It is impressive that excellence in one domain does not come at the expense of the other.”

While other surgeons average 0.5 articles each year, these top surgeon-

researchers had an average publication rate of 11 articles annually. The team also found that women are about 20% more likely to be in the top 5% of researchers in their clinical field when compared with their male counterparts, underscoring progress toward diversity and inclusion in healthcare research.

Research All-Star Lisa Cannada, M.D., an orthopedic trauma surgeon for Novant Health, spoke of this necessary progress, “Diversity in the field of orthopedics has been a cornerstone of my work, ensuring that we create an inclusive environment where the voices of women are heard and valued. Alongside this, my commitment to evidence-based medicine has [resulted in] over 200 [article] publications, highlighting the importance of rigorous research in advancing patient care.” — *EH*

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REMEMBRANCES

Former National Training Center CEO James Ray Dies at 71

James Michael Ray, M.D., former CEO of The National Training Center Sports Medicine Institute and well-respected sports medicine specialist, passed away on Wednesday, April 24, 2024, in Naples, Florida at the age of 71.

Dr. Ray was trained in orthopedic surgery at Orlando Health in Florida. He was also a Sports Medicine Fellow at the University of Wisconsin, Madison, and an academic physician and an Assistant Professor of Orthopedics/



Sports Medicine at the University of Kentucky, Lexington.

Dr. Ray was a member of the USA Olympics Sports Medicine Society and served as the team physician for the USA Pan American Games in 1988, Winnipeg, Canada. For more than 45 years, Dr. Ray treated orthopedic and sports medicine patients and was affiliated during his long career with Orlando Health and Naples Community Hospitals.

“Whether volunteering at the triathlons on Clermont’s chain of lakes or local sporting events, he passionately served athletes and community members of all skills,” his family wrote.

James Michael Ray, M.D., was born in Belleview, Illinois, on June 30, 1952, to James Percy and Darlene Ray. He received his bachelor’s degree from Loyola University New Orleans and then completed his medical degree at Louisiana State University Medical School in Baton Rouge. He also earned a master’s degree in executive health administration from the University of Florida.

Ray is survived by his wife Tracee Ray; two daughters, Ashlee Koronka, Christine Gallagher, and two sons, Connor Daher, and Blu Ray; four grandchildren, Cannon Koronka, Camdyn Koronka, Henry Gallagher, and Graham Gallagher; three brothers, Donnie Ray, Scott Ray and Steve Ray; two sisters, Krissy Ray and Karole Bogart. — TR

Former Chief of Orthopedic Surgery at Harris Hospital Dies at 81

Medical and legal expert Joseph Harvey Gaines, III, M.D., former chief of orthopedic surgery at Harris Hospital, passed away on Friday, April 12, 2024.



Dr. Gaines earned his medical degree from Louisiana State University Medical School in New Orleans. He was third in his class. Gaines completed his orthopedic residency while working at Tulane University and later he was on staff at Fort Leonard Wood Army Hospital, Brooke Army Medical Center, Santa Rosa Medical Center, University of California and The Armed Forces Institute of Pathology in Washington, D.C.

While in the U.S. Army, Dr. Gaines earned the rank of major. Once discharged, he moved his family to Fort Worth, Texas, so he could join the Fort Worth Bone & Joint Clinic. He led the clinic for many years.

While at the Fort Worth Bone & Joint Clinic, he, along with Dr. John Richardson set up a scoliosis screening program for both public and private schools in the Fort Worth area. Gaines served as Board Examiner and Case Selector for over 15 years and worked with several companies to design orthopedic implants, instruments, and surgical techniques.

Gaines also loved to teach future generations of doctors. He was an adjunct clinical professor at The University of Texas, Arlington, and a clinical instructor in the Department of Orthopedic Surgery at John Peter Smith Hospital.

He had the distinct honor of being 1 of 15 orthopedic surgeons invited by the U.S. State Department to go to China for six weeks to teach when the country opened its borders in 1979.

He was the only layperson to serve on the board of Directors of the State Bar of Texas. He also served as a Trustee of the Texas Center for Legal Ethics and as a Trustee of the Texas Bar Foundation.

Gaines was born on December 13, 1942, to Annette and Joseph Harvey Gaines, Jr. in Baton Rouge, Louisiana. He graduated from Istrouma High School and earned his bachelor’s degree from Louisiana State University. He and his wife loved to travel and spend time on the lake and their place at The Jax in the French Quarter New Orleans.

Gaines was preceded in death by his parents, Annette and Joseph H. Gaines, Jr. He is survived by his wife, Jane Ann and his seven children and ten grandchildren. — TR

Founder of the Hanson Clinic, Charles Hanson Dies at Age 85

Charles Alvin Hanson, M.D., founder of the Hanson Clinic and dedicated orthopedic surgeon for 52 years, passed away on Thursday, April 25, 2024, at the age of 85 at his home in Beulah, Colorado.

Dr. Hanson earned his medical degree from Ohio State University College of Medicine in Columbus, Ohio, in 1964. He completed his internship at Henry Ford Hospital in Detroit, Michigan, between July 1964 and June 1965 and his residency also at Henry Ford between September 1967 and January 1969.

He stayed at Henry Ford for his orthopedic residency which he com-

pleted between January 1969 and July 1972. During that same time period, Dr. Hansen also served as research investigator for the Orthopedic and Rheumatology Research Laboratories at Henry Ford.

Once his medical training was finished, he moved to Pueblo, Colorado, to start his practice. He served patients at Southern Colorado Clinic, Parkview Medical Center, St. Mary Corwin Medical Center, and Park West Surgery Center.

Dr. Hansen also founded the Southern Colorado Health Plan in September 1985 and served in many different capacities until 1994. Charles Hanson was born on July 16, 1938, to Alvin and Elizabeth Hanson in BelleCenter, Ohio. They owned a dairy farm on which he and his two sisters grew up.

He graduated from high school at the Belle Center Local Schools in 1956 then went on to complete his bachelor’s degree from Blackburn College in Carlinville, Illinois, in 1960. From July 1965 to July 1967, Hanson served as a lieutenant in the U.S. Navy Medical Corps at Portsmouth Naval Hospital in Portsmouth, New Hampshire.

He is survived by his wife Marsha Flowers; his children, Holly Hanson and Greta Hanson Maurer and his bonus children Brandice Eslinger, Colin Flowers, Brock Flowers and Derek Javin, William, Dylan, Jett, Carter, Chloe, Myla, and Maxton. He also leaves behind his sisters Dorothy McKenzie and Margaret Koop.

He was preceded in death by his parents, Alvin and Elizabeth Hanson; his wife Diane Hanson; and his son, Eric Hanson. — TR





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