

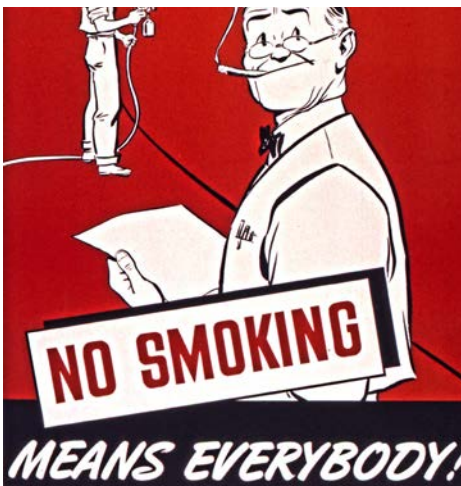
Orthopedics • This Week

week in review

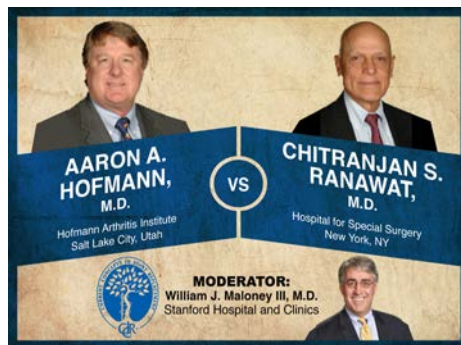
4 Obamacare After the Election ♦ Mitt Romney and Republicans have promised to repeal Obamacare if voters give them the chance in November. What will health care reform look like after the elections if they win? Read what health care marketplace expert Robert Laszewski says you need to know.

8 The Top 25 U.S. Hospitals for Total Knee Surgery ♦ This month, in looking at which hospital gives the best “bang for the buck” for a given procedure, we report on the top 25 hospitals in the country for total knee surgery.

13 Computer Assisted Surgery Not More Precise?... ♦ 5.45% Injured Soldiers Have Spine Injuries....Expanded Approval for Magnetic Prosthesis...Non Coverage for Smokers Not Justified



16 Hofmann v. Ranawat: Cementless Tibial Fixation in TKA ♦ “Cementless fixation can work, but it must be equal to or better than cement. I think it’s equal to,” asserts Aaron Hofmann. “Non-cemented fixation in the knee will prevail when it becomes reproducible and cost effective,” counters Chitranjan Ranawat.



breaking news

20 K2M’s MESA Cleared for Kids

Smith & Nephew Launches LEGION Knee

Total Knee Not a Weight Loss Panacea?

Alaska Insurer Pays for Medical Tourism – To the Lower 48!

Obesity Impact on TJA Poorly Understood

Miami Orthopedic Marketer Sued by Physician Investors

Hospital Affiliated Docs Paid More

NFL Funds Concussion Research

Biomet to Distribute CERAMENT Bone Filler

For all news that is ortho, read on.

Orthopedic Power Rankings

Robin Young's Entirely Subjective Ordering of Public Orthopedic Companies

THIS WEEK: The issue is growth. If, as seems to be the case, institutional investors are beginning to buy growth again, then how do large, diversified orthopedic companies find it again? R&D? Track record is not great. Acquisitions? Mixed bag. Sitting on record cash balances, ortho needs to find an answer.

RANK	LAST WEEK	COMPANY	TTM OP MARGIN	30-DAY PRICE CHANGE	COMMENT
1	1	Globus Medical	30.06%	15.65%	Even at \$1.5 billion market cap, GMED is still the 3rd least expensive P/E to growth rate ortho stock.
2	7	Zimmer	26.37	9.44	Huge jump for Big Blue this week. New personnel and momentum on the sales side is energizing the troops.
3	3	Orthofix	16.23	8.41	Lowest PEG, 2nd lowest earnings growth expectations and 5th best P/E ratio. Also cash up 2.5x in 12 months.
4	6	ArthroCare	(0.80)	12.78	Six out of eight analysts covering ARTC have either a BUY or Strong BUY on the stock. At these prices, not much downside.
5	2	Smith & Nephew	21.36	8.51	SNN found plenty of stock buyers this past month. But consensus on Wall Street is that EPS will be flat to down for the rest of 2012.
6	4	Medtronic	28.65	6.56	MDT has also had a good run recently and, of course, there's that 2.9% dividend. But most analysts are expecting a 2% drop in sales this quarter.
7	5	Symmetry Medical	5.63	8.24	Most analysts think that SMA's earnings dipped in the 3rd quarter. Actual numbers should be released in about 30 days.
8	8	Integra LifeSciences	13.36	4.75	When analysts start talking M&A in ortho, somehow IART gets mentioned. But, for now, all seems quiet in Plainsboro.
9	9	Stryker	23.68	4.59	SYK has definitely lagged during this past orthopedic stock run up. Why? Lack of a Chief Passion and Vision Officer.
10	10	Exactech	7.68	2.79	With 1.12 Price-to-Sales ratio, very cheap. In fact, 4th cheapest (ATEC is the lowest). And sales growth is around 6%.

Robin Young's Orthopedic Universe

TOP PERFORMERS LAST 30 DAYS

	COMPANY	SYMBOL	PRICE	MKT CAP	30-DAY CHG
1	MAKO Surgical	MAKO	\$18.29	\$781	21.77%
2	TiGenix	TIG.BR	\$0.87	\$83	16.46%
3	Globus Medical	GMED	\$16.70	\$1,511	15.65%
4	ArthroCare	ARTC	\$32.03	\$888	12.78%
5	CryoLife	CRY	\$5.92	\$163	11.70%
6	NuVasive	NUVA	\$23.26	\$1,011	10.76%
7	RTI Biologics Inc	RTIX	\$4.23	\$236	10.73%
8	Wright Medical	WMGI	\$21.85	\$866	9.52%
9	Zimmer Holdings	ZMH	\$67.45	\$11,783	9.44%
10	Smith & Nephew	SNN	\$55.70	\$10,017	8.51%

WORST PERFORMERS LAST 30 DAYS

	COMPANY	SYMBOL	PRICE	MKT CAP	30-DAY CHG
1	Bacterin Intl Holdings	BONE	\$1.49	\$63	-3.25%
2	TranS1	TSON	\$2.78	\$76	1.83%
3	Johnson & Johnson	JNJ	\$69.06	\$190,401	1.93%
4	Alphatec Holdings	ATEC	\$1.67	\$150	2.45%
5	Exactech	EXAC	\$17.29	\$229	2.79%
6	MiMedx Group	MDXG	\$2.80	\$233	2.94%
7	Stryker	SYK	\$56.29	\$21,415	4.59%
8	Integra LifeSciences	IART	\$41.90	\$1,133	4.75%
9	Conmed	CNMD	\$28.38	\$807	5.78%
10	Medtronic	MDT	\$43.35	\$44,223	6.56%

LOWEST PRICE / EARNINGS RATIO (TTM)

	COMPANY	SYMBOL	PRICE	MKT CAP	P/E
1	Medtronic	MDT	\$43.35	\$44,223	12.86
2	Zimmer Holdings	ZMH	\$67.45	\$11,783	13.33
3	Johnson & Johnson	JNJ	\$69.06	\$190,401	13.70
4	Stryker	SYK	\$56.29	\$21,415	14.47
5	Orthofix	OFIX	\$44.60	\$846	15.22

HIGHEST PRICE / EARNINGS RATIO (TTM)

	COMPANY	SYMBOL	PRICE	MKT CAP	P/E
1	Wright Medical	WMGI	\$21.85	\$866	84.04
2	NuVasive	NUVA	\$23.26	\$1,011	70.48
3	Symmetry Medical	SMA	\$9.85	\$361	57.94
4	RTI Biologics Inc	RTIX	\$4.23	\$236	23.50
5	Exactech	EXAC	\$17.29	\$229	21.35

LOWEST P/E TO GROWTH RATIO (EARNINGS ESTIMATES)

	COMPANY	SYMBOL	PRICE	MKT CAP	PEG
1	Orthofix	OFIX	\$44.60	\$846	0.99
2	ArthroCare	ARTC	\$32.03	\$888	1.03
3	Globus Medical	GMED	\$16.70	\$1,511	1.22
4	Zimmer Holdings	ZMH	\$67.45	\$11,783	1.38
5	Stryker	SYK	\$56.29	\$21,415	1.45

HIGHEST P/E TO GROWTH RATIO (EARNINGS ESTIMATES)

	COMPANY	SYMBOL	PRICE	MKT CAP	PEG
1	Wright Medical	WMGI	\$21.85	\$866	9.20
2	NuVasive	NUVA	\$23.26	\$1,011	7.48
3	CryoLife	CRY	\$5.92	\$163	4.93
4	Symmetry Medical	SMA	\$9.85	\$361	4.83
5	Smith & Nephew	SNN	\$55.70	\$10,017	3.96

LOWEST PRICE TO SALES RATIO (TTM)

	COMPANY	SYMBOL	PRICE	MKT CAP	PSR
1	Alphatec Holdings	ATEC	\$1.67	\$150	0.76
2	Symmetry Medical	SMA	\$9.85	\$361	1.00
3	Conmed	CNMD	\$28.38	\$807	1.11
4	Exactech	EXAC	\$17.29	\$229	1.12
5	CryoLife	CRY	\$5.92	\$163	1.36

HIGHEST PRICE TO SALES RATIO (TTM)

	COMPANY	SYMBOL	PRICE	MKT CAP	PSR
1	TiGenix	TIG.BR	\$0.87	\$83	72.23
2	MiMedx Group	MDXG	\$2.80	\$233	29.97
3	MAKO Surgical	MAKO	\$18.29	\$781	9.24
4	Globus Medical	GMED	\$16.70	\$1,511	4.56
5	TranS1	TSON	\$2.78	\$76	3.96

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

Advertise with Orthopedics This
Week

Orthopedics



Click Here for more details
or email tom@ryortho.com
Tom Bishow: 410.356.2455 (office)
or 410.608.1697 (cell)

Obamacare After the Election

By Walter Eisner



Wikimedia Commons and DonkeyHotey

What will Obamacare look like the day after the November 6 election, or even on January 20, 2013 when the President is sworn into office?

Robert Laszewski, publisher of *Health Care Policy and Marketplace Review* (<http://healthpolicyandmarket.blogspot.com/>), predicts it will look pretty much the same regardless of the outcome of the elections. Laszewski is president of



Robert Laszewski/Health Policy and Strategy Associates

Health Policy and Strategy Associates, LLC. He helps clients navigate health policy and market changes. He spent nine years as a COO of a health and group benefits insurer before forming his company in 1992 and is no fan of Obamacare.

Laszewski cites two main reasons for his prediction: The Electoral College and the Law.

Electoral College

Over the next 40 days and 40 nights, the skies will rain political ads on six contested states. We know they are contested because the campaigns have announced their heaviest media buys in those states.

Those states (Florida-29, Ohio-18, North Carolina-15, Virginia-13, Wisconsin-10, and New Hampshire-4) hold 89 undecided electoral votes. You need

270 votes to win the White House. If one assumes the remaining bright red states stay red and dark blue states remain blue, Barack Obama sits at 258 and Mitt Romney is at 191 electoral votes. Simple math says Romney will need to capture 79 of the 89 undecided votes. He has to win Ohio AND Florida, AND at least three out of the remaining four states. Obama only needs to capture Ohio OR Florida, OR any two of the remaining four states. In elections it's better to have "ORs" than "ANDs."

Congressional Math

But even if Republicans capture the White House, retain a majority in the House of Representatives AND capture the majority in the U.S. Senate, Laszewski writes that it took 60 Senate votes to pass the law and it will take 60 votes to repeal it, and, "there is no way" Romney will have that many Senate votes.



<http://www.270towin.com/>

What Romney could do with a bare Senate majority, and Republican control of the House, is defund Obamacare. The Republicans could do this through the same Senate budget reconciliation rules the Democrats used to pass the final components of the law in the first place.

However, says Laszewski, the Senate's budget reconciliation process is long and complicated. "You don't just whip it out on January 22nd and quickly pass a bill. So, if Romney is in office with a Republican Senate majority big enough to defund the new health law, what are consumers, employers, insurers, providers, state regulators, and even HHS (Department of Health and Human Services) supposed to do in the meantime?"

Congressional Priorities Meet Obamacare Calendar

Republicans have a long list of big budget items on their to-do list, says Laszewski. "Romney's first budget priorities

will almost certainly contain his promises to tackle the deficit and get the economy in order. He [Romney] says he is going to do this by reforming the tax system, permanently fixing the \$1 trillion sequestration issue, and reforming Medicare and Medicaid, while increasing defense spending. And, it is likely the new Congress will have to deal with the expiration of the Bush tax cuts as its first order of business. All of this in one budget season will be a huge lift. It will likely be late in 2013 before the Republicans produce a final budget. Rarely, even in the easiest political times does a budget get completed before December."

The problem with this timing, Laszewski points out, is that Obamacare is scheduled to go live with the bulk of its provisions on January 1, 2014.

Exchanges, Medicaid and Employer Mandates

Starting on October 1, 2013 people will be able to start signing up for health

insurance on the new exchanges so they can receive tens of billions of dollars in annual subsidies in order to purchase health insurance.

In addition, on January 1, 2014, as many as 15 million new people will be eligible for Medicaid expansion. "Complicating this is the Supreme Court decision that makes the Medicaid expansion optional for each state. But every state will have to decide whether they are going to cover their share of the 15 million Americans originally estimated to be eligible for it. While many states are now saying they will not participate, that decision is nowhere near final in any state with the hospital and physician lobby as well as advocates for the poor intent on their state getting the hundreds of billions of dollars in new federal payments the ACA [Affordable Care Act] has promised," says Laszewski.

Many states are going to have a huge and protracted debate over the Medicaid expansion. That debate will involve negotiations with the federal government over the terms under which they might be willing to make that expansion. Expanding their programs will require lots of planning and work. "If Romney is in the midst of trying to gut the Medicaid money from the ACA during 2013, what are these states supposed to do?" asks Laszewski.

Furthermore, most employers will be required to provide coverage or pay a fine starting on January 1, 2014.

Insurers, Medicare and ACAs

Insurance companies have to get new products ready for the insurance exchanges and "fundamentally change their underwriting and pricing" to comply with the new insurance market

Introducing The 2nd Generation
of a New Design in Guidewire
Technology

Improvements Over 1ST Generation:

- Reduces Accidental Pullout
- Stiffer
- Still Reduces Guidewire Advancing
- Still No Kinking

Y-WIRE[®] 2
Feel the Difference.

Why are you using a standard guidewire?

*Does your guidewire advance?
Does your guidewire kink?*

Why not
Y-WIRE[®] 2
Feel the Difference.

SAFEWIRE[™]

8963 Stirling Road, Suite 7
Cooper City, FL 33328
P 800.286.9155
F 954.233.0711

www.safe-wire.com

Advertisement

rules on January 1, 2014, according to Laszewski. He says health plans offering private Medicare plans are due for big cuts in 2013 and 2014 under the Act. "Doctors and hospitals will need to be ready for their own Medicare cuts under the ACA. Many are spending millions of dollars building the new Medicare Accountable Care Organizations (ACOs) to deliver care—they could instantly evaporate if the law is defunded. A growing number of new health insurance co-ops—most often provider driven—have been granted tens or hundreds of millions of dollars each to build new health plans and that money could be instantly gone mid-way through the building process."

"It's the Law"

The states are expected to have their insurance exchanges ready on October

1, 2013. If they don't, Laszewski says HHS is supposed to have a back-up exchange ready to go. "Will a Romney administration continue to build these back-up exchanges while the law is still on the books?"

Romney has also said that he will quickly appoint a Secretary of HHS who will let everyone off the hook through new regulations.

"How is he going to do that?" asks Laszewski. "The ACA might be unpopular but it is the law of the land. The only way to get rid of it is to repeal it—or to legally cripple it by defunding it."

Laszewski finds it hard to believe that a president would simply decree that a 2,800-page law could be ignored." If the President of the United States can pick and choose which laws to follow,

why can't the rest of us? The rule of law is pretty basic to our system of government."

Even if a Romney administration tried to circumvent the health law statute by choosing to ignore it, Laszewski believes Obamacare advocates would be in any number of federal courts pretty quickly.

Unpopular Law, Popular Provisions

Once we get through 2013, there would still be some pretty big residual problems if Republicans were able to defund the law and thereby kill some of its biggest parts. Laszewski says that is because gutting the money from the bill under budget reconciliation rules would still leave lots of those 2,800 pages of the original legislation in place. The biggest element still left after defunding would be the insurance reform rules.

He explains that under the new health law, starting on January 1, 2014, insurance companies will no longer be able to refuse to cover people with pre-existing conditions. They will have to offer insurance products predetermined by government regulation, underwrite to a minimum 80% medical loss ratio, and charge older people no more than three times the premiums they charge younger people.

“These provisions are popular and would continue to be popular. The problem is that if the Republicans gut those elements of the new health law that are budget related, they would kill the individual mandate to buy insurance as well as the subsidies consumers would have used to afford health insurance, that now averages \$15,000 a year for a family,” says Laszewski.

While some consumers might be happy to see the individual mandate repealed, all of these changes would leave insurance companies, according to Laszewski, being forced to sell insurance poli-

cies to any person about anytime they wanted to buy one—whether they are sick or healthy.

Repeal: “One Hell of a Mess”

The insurance industry supported insurance reform in the new law with the expectation that they would get the individual mandate and the insurance subsidies necessary for a cross section of the sick and healthy population and a workable market, says Laszewski. Instead, he continues, the insurance companies could be faced with an unworkable market—not only for them but also for consumers who would face dramatically higher prices as a result.

Concludes Laszewski, “The Congress could let the insurance industry off the hook—but not without Democratic votes and I doubt many Democrats would want to help deconstruct their signature domestic policy achievement.

“I understand Mitt Romney’s political and policy objectives here. But I do

not understand how he is going to do it without creating one hell of a mess.”



Chief Justice John Roberts/Wikimedia Commons, Supreme Court and Steve Petteway

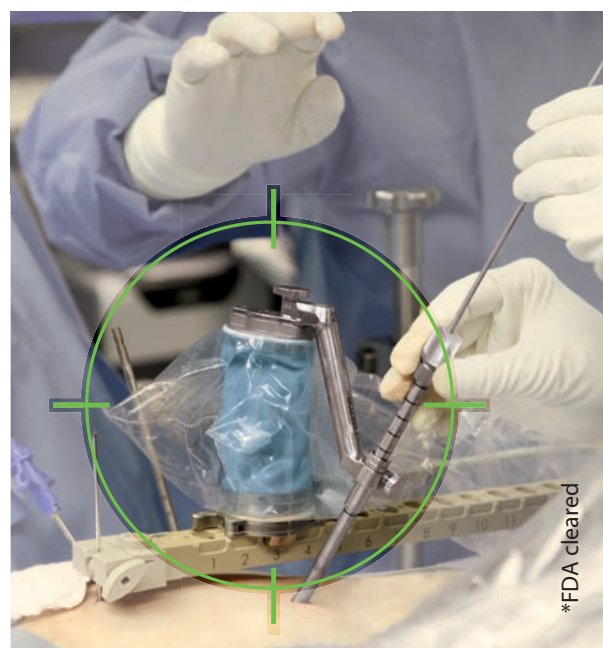
Thanks to a conservative chief justice of the Supreme Court, Obamacare is the undisputed law of the land. Providers, payers, patients may have to survive the rain for the next 40 days and 40 nights, but come January, they best prepare to live with Obamacare. ♦

LEAD the Spine Renaissance™

Mazor Robotics’ Renaissance™ is transforming spine surgery from freehand procedures to highly-accurate, state-of-the-art robotic procedures, with less radiation—even for minimally invasive surgery (MIS), scoliosis, and other complex spinal deformity cases.



www.MazorRobotics.com



Advertisement

The Top 25 U.S. Hospitals for Total Knee Surgery

By Elizabeth Hofheinz, M.P.H., M.Ed.

Live in California and had about all you can take of knee pain? You may have travel a bit. If you want to have the best total knee surgery experience, you'll have to go to North Carolina, Kansas, and Indiana. Three hospitals in those states are sitting at the top of this month's "best bang for the buck" when it comes to total knee surgery. Behold the top 25 hospitals in the country for total knee surgery.

This ranking takes into consideration: How many procedures, how many problems, and how many, namely, procedure volume, complication rates, and charges for the procedure. Since the procedures measured are in-patient, by definition these tend to be older patients with more co-morbidities and are, therefore, more complex cases.

(See table of next page.)

Number One

Topping the list of best places in the U.S. for total knee surgery is The Moses H. Cone Memorial Hospital in Greensboro, North Carolina. We asked Anne Macner, service line administrator for Cone, why she thinks their facility has been ranked number one for total knee surgery. She told *OTW*, "Our surgeons do a high volume of total knee replacements, and high volume is associated with high quality. Also, we use standard, value-based protocols. Additionally, we have an active clinical performance improvement process."

Regarding their average three-day length of stay for this procedure, Macner commented, "Our short length of



Wikimeida Commons and Jaime de la Fuente

stay is really due to strong collaboration between the physicians and hospital. Our surgeons have really taken the lead in reducing the time spent in the hospital. The surgeons begin preparing patients for a short stay by setting the expectation when the surgery is initially planned. Once surgery has been scheduled, patients and caregivers participate in a preoperative education program, 'Joints in Motion,' that supports continued preparation for a short length of stay and success at home. Patients who are likely to require an inpatient rehabilitation program following total knee replacement are identified prior to surgery and these patients are provided with information on rehab programs prior to their surgery so they can begin to prepare for this transition."

"Patients typically begin physical therapy on the day of surgery and physi-

cal therapy is provided, as appropriate, twice a day, seven days a week to promote patient progression. Strong collaboration with community partners such as skilled nursing facilities and home health agencies assures that access to follow-up therapy and early, safe transitions back to home and the community."

The Moses H. Cone Memorial Hospital has an average charge of \$26,143 for this surgery. Macner told *OTW*, "We are committed to providing high quality services at a good value to our patients and community. Our work to eliminate complications allows us to reduce our expenses. In addition, supply expenses are managed through a value analysis process. Our surgeons' commitment to returning patients to their homes as quickly and safely as possible contributes significantly to our ability to manage costs."

Overall Best Hospital	Provider Name	State	Average Charge	Average LOS	Complication Rate
1	THE MOSES H. CONE MEMORIAL HOSPITAL OPERATING CORPORATION	NC	\$26,142.74	3	3.8%
2	KANSAS MEDICAL CENTER LLC	KS	\$25,209.28	3	1.7%
3	ST. FRANCIS HOSPITAL-ST. FRANCIS HOSPITAL & HEALTH SERVICES - MOORESVILLE	IN	\$44,893.75	3	4.1%
4	FRESNO SURGERY CENTER	CA	\$45,632.09	2	3.9%
5	KANSAS SURGERY & RECOVERY CENTER LLC	KS	\$22,655.05	3	4.8%
6	ORTHOPEDIC HOSPITAL LTD.- TEXAS ORTHOPEDIC HOSPITAL	TX	\$49,984.58	2	3.2%
7	LAKEVIEW MEMORIAL HOSPITAL ASSOCIATION INC- LAKEVIEW HOSPITAL	MN	\$22,923.32	2	4.7%
8	KANSAS CITY ORTHOPAEDIC INSTITUTE LLC	KS	\$30,123.28	2	1.9%
9	MOUNT CARMEL NEW ALBANY SURGICAL HOSPITAL	OH	\$29,681.44	1	5.3%
10	GASTON MEMORIAL HOSPITAL, INC.	NC	\$29,540.12	2	2.7%
11	ST. CLOUD HOSPITAL	MN	\$45,743.74	3	3.8%
12	NEW ENGLAND BAPTIST HOSPITAL	MA	\$22,405.51	3	5.9%
13	ST VINCENT'S MEDICAL CENTER INC.	FL	\$50,103.94	2	4.8%
13	MISSION HOSPITAL, INC.	NC	\$32,687.01	3	5.5%
15	STORMONT-VAIL HEALTHCARE INC.	KS	\$48,921.78	2	3.9%
16	DEACONESS HOSPITAL, INC.	IN	\$30,641.38	2	5.2%
17	INDIANA ORTHOPAEDIC HOSPITAL	IN	\$30,859.92	2	2.9%
18	NORTHERN UTAH HEALTHCARE CORPORATION - ST. MARK'S HOSPITAL	UT	\$40,494.29	2	2.4%
19	FORSYTH MEMORIAL HOSPITAL, INC. - CHAIR CITY FAMILY PRACTICE/MEDZONE	NC	\$37,150.62	3	4.9%
20	ST HELENA HOSPITAL	CA	\$102,227.46	1	4.1%
21	MEMORIAL HOSPITAL OF SOUTH BEND, INC.	IN	\$51,226.05	2	3.6%
22	ST JOSEPH MERCY HOSPITAL-SMHC- ST JOSEPH MERCY OAKLAND	MI	\$45,357.88	3	2.2%
23	LAKELAND REGIONAL MEDICAL CENTER INC.- LAKELAND REGIONAL MEDICAL CENTER	FL	\$57,992.93	3	4.6%
24	MERCY HOSPITAL, INC.-CMC - MERCY	NC	\$49,351.12	3	5.9%
25	PITT COUNTY MEMORIAL HOSPITAL INC.	NC	\$41,615.98	3	5.4%

Source: PearlDiver Data Technologies

Number Two

Kansas Medical Center (KMC) in Andover, Kansas, is ranked second on our list of best overall place to have total knee surgery. Dr. Jim Joseph, an orthopedic surgeon and a member of KMC's surgical committee tells *OTW*, "We have created a program that has become very

efficient and has enabled reproducible results that have truly lowered complications. As a smaller facility, we are able to create a standard practice that is utilized across all cases. This standard method is then repeated two to three times per day, allowing our team to truly master the technique. Additionally, we have a designated team that

always works with our surgeon. That has allowed the staff and the surgeon to become extremely familiar with one another."

"Also, the facility itself, from the physical plant, to the staffing model, is designed to minimize complications. All of Kansas Medical Center's rooms are

private and our floors have a 1:4 nurse to patient ratio (exclusively employing RNs). Thanks to the standardized methodology, nurses are well aware of what issues could arise and what warning signs to look for.”

Commenting on KMC’s complication rate for this surgery—1.7%—Dr. Joseph stated, “The combination of efficient surgery, excellent perioperative medical management, and early, aggressive rehabilitation has produced an excellent environment for patients undergoing knee replacement surgery. Most complications from these types of procedures come in the form of medical issues. In order to combat this problem we use an excellent team of hospitalists. Led by Dr. Randy Mijares, this team is unique in that they only manage post-surgical patients in a medical sense. They do an extraordinary job of finding and fixing issues before they become

real problems. Of course, it should be noted that the previously mentioned 1:4 nurse to patient ratio as well as our nursing staff themselves play an indispensable role in this. From a surgical standpoint most complications revolve around wound management. The surgical team spends a great deal of time on wound closure to help alleviate this problem.”

The average charge for total knee surgery at Kansas Medical Center is \$25,209. Dr. Joseph stated, “Familiarity and comfort of the surgical team keeps complications down. It also speeds up procedure time. Most knee replacements take under an hour to complete thanks to the efficiency of the OR team. Also, the techniques used are tested and proven. They are cautious to adopt technologies or fads which are expensive and not always worth the price. One other large cost saver is our

implant contract—we use one vendor for all orthopedic implants. This agreement allows for much better pricing.”

Regarding the facility’s three-day length of stay for this procedure, Dr. Joseph noted, “Aggressive, early rehabilitation is a must. We also use narcotics judiciously within a multi-modal pain management system. The goal is get the patient up and moving coherently as quickly as possible.”

Malik Idbeis, business development manager for Kansas Medical Center, commented, “Kansas Medical Center owes a lot to Dr. Jim Joseph and the Physician Assistant who works with him, Mike Easter. They are the gentlemen who do the vast majority of these and other orthopedic procedures at KMC. They have done an excellent job implementing their methodology and training the staff. Their attention to



1ST ANNUAL HOUSTON STEM CELL SUMMIT '12
October 26 & 27, 2012

The Most Informative Stem Cell Meeting of the Year!

More stem cell academic and clinical research is emerging from Houston’s 50 hospitals, clinics and medical schools including MD Anderson, Baylor College of Medicine, Texas Heart Institute and Texas-based entrepreneurs than anywhere else in the Americas.

\$350 Registration for staff of Texas Medical Center

(proof of affiliation i.d., email address and/or business card or badge required)
\$1,000 Registration (September 16, 2012 - October 25, 2012)
\$1,200 Registration (Onsite)

JOIN US
OCTOBER 26th and 27th
Houstonian Hotel, Club, and Spa

KEYNOTE SPEAKER

Rick Perry
Governor of Texas



REGISTER TODAY AND SAVE!
stemcellsummit.com

Advertisement

detail is second to none as evidenced by our wonderful ranking.”

Number Three

St. Francis Hospital-St. Francis Hospital and Health Services in Mooresville, Indiana, comes in as the number three spot in the U.S. to undergo total knee surgery. Jared Stark, executive director of Franciscan St. Francis Health-Mooresville, tells *OTW*, “At the Center for Hip and Knee Surgery [CHKS] we feel that a key is having highly skilled, board-certified, fellowship-trained surgeons and support team who focus almost exclusively on joint replacement and who work hard to be the best. One result has been a high volume of surgeries, which translates to a high level of experience.”

“Within the hospital, we have established our joint replacement program as a Center of Excellence. Since its founding in 1986 as the first center in Indiana to specialize in joint replacement surgery, the Center has been a pioneer in the field, continually conducting research into surgical techniques and implant improvement. But the most important ingredient in CHKS day-to-day success is the communication and coordination fostered among all team members—including our surgeons, nurses, internists, therapists and support staff—from the time the patient decides to have the surgery until the patient leaves the hospital and afterward. That coordination extends through pre- and post-operative care, including extensive education of patients pre- and post-surgery, involvement of internal medicine hospitalists perioperatively and throughout the patient’s hospital stay, highly personalized care throughout their surgery and hospital stay, and case management to

ensure the patient has the proper care and rehabilitation after they leave the hospital.”

Regarding his facility’s complication rate—4.1%—Stark told *OTW*, “Using its extensive database, the Center for Hip and Knee Surgery has studied two areas perhaps more than any others: prevention of infection and alignment in knee replacement. Infection is considered the most devastating postoperative complication of any joint replacement. Prevention is the key to successfully controlling infection. CHKS doctors have categorized risk factors for infection and have developed protocols to minimize infection. The most important factor in postoperative infection is the operating room environment. The use of ultraviolet lighting, antibacterial drapes and irrigation, standardization in pre-operative intravenous antibiotics, and efficient surgery have been developed by CHKS surgeons and are being used in the operating rooms at Franciscan St. Francis Health—Mooresville. This has reduced the center’s infection rate to almost one half of 1%.”

“Aligning the implants relative to the bone and correcting the misalignment that results from arthritis are important for the long-term success of knee replacements. The CHKS surgical team was honored with the top award in surgical technique on this subject from The Knee Society. Once on the unit, under the guidance of a respiratory therapist, patients use an incentive spirometer to help maximize their lung capacity. Steps also are taken to minimize the possibility of blood clots using blood thinners and compression hose.”

As for their charge for this procedure—\$44, 894—Stark commented to *OTW*, “We reduce costs by shortening

InQu® BONE GRAFT EXTENDER & SUBSTITUTE

SYNTHETIC GOES GREEN

A greener approach is growing.

- Biomechanically and radiographically equivalent to autograft*
- Compressive resistant
- Available in 3 configurations
Matrix | Paste Mix | Granules

Bio meets synthetic.
That's the nature of InQu.®

1-888-705-ISTO (4786)
www.istotech.com

InQu is a registered trademark of ISTO Technologies, Inc.
Patents pending.

ISTO
Technologies, Inc.

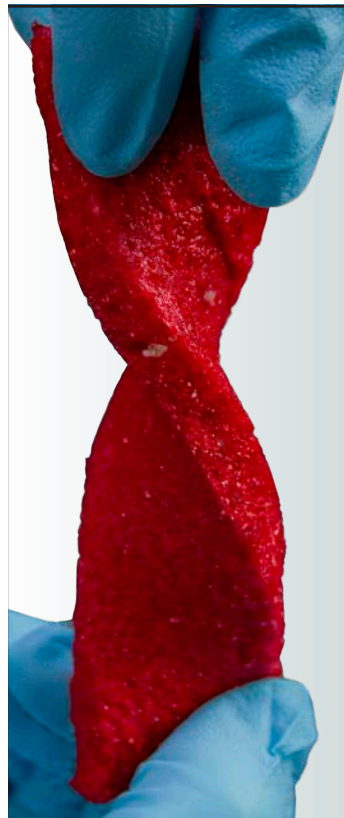
* Walsh WR, Oliver RA, Gage G, et al. Application of resorbable poly (lactide-co-glycolide) with entangled hyaluronic acid as an autograft extender for posterolateral intertransverse lumbar fusion in rabbits. *Tissue Eng Part A*. 2011;17:213-220.

Advertisement

the length of stay with effective pain management techniques, by minimizing complications, by getting patients mobilized soon after surgery and by involving physical therapists the day of surgery. We have developed standardized order sets and protocols, and we have highly trained and experienced surgeons and a consistent, dedicated OR staff, which equates to efficiency in the operating suite during surgery and in readying the room for the next case. We also foster a high level of collaboration with surgeons and nursing units to manage costs.”

Regarding their three-day length of day for this procedure, Stark stated, “One key to short length of stay is superior pain management. Another factor is early mobilization—getting patients up and moving about early to improve circulation and mobility. And the physical therapists are involved very early in the process. Also, during the pre-operative education process, the expectation is established that discharge will occur on post-op day two or three. Patients are provided pre- and post-operative exercise regimens and encouraged to follow them. They are informed of what is expected of them prior to surgery and afterward and given a Joint Journey binder at the time of surgery that details each day of their hospital stay following surgery—what they can expect and what they are expected to do. Also, discharge planning is part of the pre-operative education visit.”

Lastly, Stark noted, “Our joint replacement program has been recognized by numerous accolades. What impresses me the most, though, are the accolades from our patients—the high praise they give their surgeon, the nurses, the friendly, caring attitude shown by our staff.” ♦



nanOss®
Bioactive
3D

Another dimension
brought to you by



Advertisement

This research was performed by PearlDiver Data Technologies, an Orthopedics This Week-affiliated company with a proprietary database that includes more than one billion patient records and includes de-identified Medicare and private payer data as well as specific industry data as compiled by PearlDiver analysts.

The overall ranking is determined by the facility's ranking in each of three categories; Procedure Volume, Complication Rate, and Pricing. The ranking only includes facilities with 100 or more estimated procedure. Estimated procedure volume is determined by the total volume of procedures reported to Medicare extrapolated to include all age groups/payer types. Average charges

are determined based upon the actual charges billed to Medicare divided by the total number of procedures reported to Medicare. Finally, complication rate is the rate at which complications were reported within Medicare following the primary procedure. The Overall Best Hospital is arrived at by the sum of the three rankings, which is treated as a total score. This score is then ranked to determine the Overall Best Hospitals.

NOTE: Estimated volumes account for all payer types and all age groups based upon data from the National Inpatient Sample release by Agency for Healthcare Research and Quality (AHRQ). It is assumed that each facility follows the same age and payer type trend.

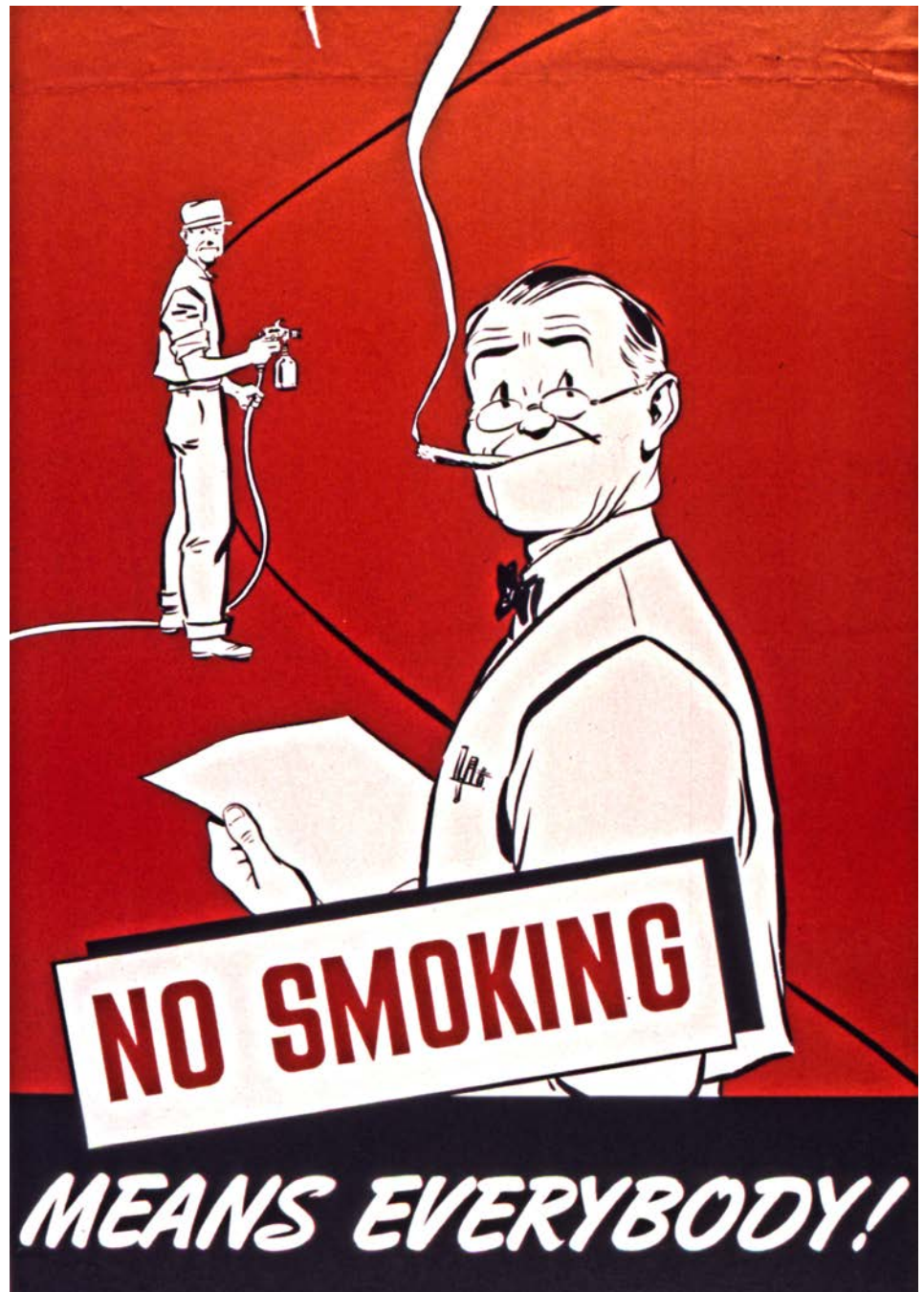
Computer-Assisted Surgery Not More Precise? Non Coverage for Smokers Increasing and More...

By Elizabeth Hofheinz, M.P.H., M.Ed.

Computer Assisted Surgery Not More Precise?...5.45% Injured Soldiers Have Spine Injuries...Expanded Approval for Magnetic Prosthesis... Non Coverage for Smokers Not Justified

Computer-Assisted Surgery Not More Accurate?

Duncan Meuffels M.D., Ph.D. is an orthopedic surgeon at the University Medical Centre Rotterdam in The Netherlands. Even he was surprised by the findings of his recent study, "Computer-Assisted Surgery [CAS] is not more accurate or precise than conventional arthroscopic ACL reconstruction: a prospective randomized clinical trial." Asked what led him to select this topic for study, Dr. Meuffels told *OTW*, "In my sports medicine practice I treat many patients with anterior cruciate ligament [ACL] injuries, who in general can return to their original sport. There are however, some patients who do less well and are not as satisfied with their reconstruction. The literature shows that mal-positioning of the new ACL graft is the reason for failure after an ACL reconstruction in 4 out of 5 cases. I had already used computer-assisted surgery for some time for total knee replacement and had seen its potential in neurosurgery. Computer-assisted surgery gives the surgeon an extra feedback and could have additional value in choosing the right tunnel position for the ACL graft. The possibility to template before you actually position the new ACL graft and to verify the actual creating and positioning of



Wikimedia Commons and U.S. National Archives and Records Administration

the ACL, has great potential. It was also a good teaching tool for me and for the orthopedic surgeons I train.”

“It was a surprise and maybe even a little disappointing at first to find out with our three dimensional CT data that our actual positioning was no more accurate or precise than without the CAS. We used a CAS system that intra-operatively references to X-rays taken of the knee at the beginning of the surgery. It is possible that the acquiring or processing of the information is not fully reproducible. The templating is done on an X-ray image which is a two dimensional estimate in percentages of the size of the femur and tibia of what an ideal positioning would be. There is a lot of anatomical variance between every individual. The chosen position is an average of this variance and should possibly be tailored more to each and

every individual. During surgery we already take a lot of different variables in consideration including the size of the femur and tibia, the intercondylar size and shape, the graft size, the position of the posterior cruciate ligament and the lateral meniscus. And dynamically we check for anterior impingement on the intercondylar notch. Possible adding more information with the CAS system does not improve positioning.”

“This study does not give the average orthopedic surgeon a reason to change to CAS ACL surgery or to add CAS ACL surgery to his repertoire. We have had a lot of positive response, congratulating us on a very honest and methodologically sound clinical trial. A number of surgeons are very interested in using our measuring skills to look at three dimensional positioning of the ACL tunnel and are asking us for our expertise. The orthopedic world should also be aware that there is a possible difference in what we see and what we actually do during surgery, especially arthroscopic surgery. Arthroscopic surgery and computer-assisted surgery have immense possibilities to enlarge what we see and give us a sense of accuracy and precision. We should, however, not stop checking our results and also keep a wider vision.”

5.45% of Injured Soldiers Have Spine Injuries Captain James Blair, M.D. is an orthopedic surgery resident at the San Antonio Military Medical Center in Fort Sam Houston. He has taken on a novel project—Spinal Column Injuries Among Americans in the Global War on Terrorism. Dr. Blair tells *OTW*, “There are numerous studies on the extremity injuries sustained by U.S. soldiers. However, we have found that there exists a subset of these injured patients whose lives are on hold because of back and spine injuries. After extensive

limb-salvage or amputation rehabilitation, many patients say, ‘Doc, I would be running or back to work again if it were not for my back.’ It turns out that this issue had never been studied; we felt we owed it to our wounded warriors...especially since there are recent studies indicating that back pain is one of the primary reasons that people are medically retired from the military.”

“We worked from a database of over 11,000 injured service members, and found that 5.45% of them had back or spine injuries. There have been huge advances in combat casualty care, in body armor, and vehicular design—and these are saving lives. But we are seeing an increasing number of patients with severe spine or back injuries that are caused by explosives or motor vehicles (either the vehicle is hit by an IED or there is a collision).”

“We have a dataset of wartime spinal cord injuries larger than any other ever published—104. We know that there is a huge correlation between a gunshot wound to the spine and getting a spinal cord injury. So we are going to try to determine if acutely operating on a penetrating injury to the spinal cord improves neurological function—this would be hugely helpful to surgeons in the wartime theatre.”

Expanded Approval for Magnetic Prosthesis for Children With Bone Tumors Jim Wittig, M.D. is chief of Orthopedic Oncology at Mount Sinai Medical Center in New York. He tells *OTW*, “Magnetic prostheses for bone sarcomas are proving to be very helpful in treating children. They are currently FDA approved for use in children with distal femur tumors, but that approval should be expanded in the next year. With this remarkable product the surgeon removes the tumor and puts in a

MedCure

Experience. Expertise. Excellence.



Cadaveric Anatomical Specimens

Surgical Training Centers

Course Management Specialists

Global Service

Oregon - Nevada - Florida - Rhode Island

Call 503.764.9919 MedCureSTC.org

Advertisement

prosthetic replacement; then the child can come to the office later as he or she is growing. The magnet spins around the leg and gear shafts turns as in a corkscrew mechanism; it takes four minutes to expand each millimeter. I have not yet expanded anyone, but I did get special permission to perform an upper tibial surgery and expansion for a girl who was in desperate need. The only alternative to this procedure is to put in a prosthesis, make an incision, use special screws to lengthen it... all the while risking infection...and of course, you have another operation later. I am publishing a surgical video wherein I broke the surgery down into each specific steps, and discussed the mechanism as well as the utility in the skeletally immature patient. There are more published outcomes in Europe, where a recent team of researcher published on a group of 20 to 30 patients; there were some instances of infection, but that is typical of any type of limb sparing surgery. This new option holds a lot of promise.”

Deny Payments for Smokers? A spine surgeon tells *OTW*, “It is disconcerting that more and more of my colleagues are encountering situations where the hospital is harassing us not to use certain products or perform certain surgeries. One disturbing trend is that we are seeing insurers questioning and/or denying payment because the person is a smoker. When I get a physician on the phone from the insurance company—so, a peer to peer consult—I am being increasingly asked, ‘Did you know this person was a smoker?’ and ‘You know they are more at risk for a nonunion.’ This creeping practice is just wrong. Patients pay for this insurance and they have a right to surgery. And I can’t control their lives. I’m in the Midwest where about 80% of the

population smokes here, so this should be interesting going forward. These are private patients and private insurers are playing this game...just imagine when the government gets involved.”

James Lawson and James Quella Join

DJO Board DJO Global has announced that James R. (Ron) Lawson and James Quella as new members of the Board. Mr. Quella will also serve on the Compensation Committee of the Board. Lawson, who is Chairman of the Board of IMDS, has over 35 years of experience in the orthopedic medical device industry. He is a member of the Health Care Advisory Board of Arsenal Capital Partners and a member of the board of directors of Cold Plasma Medical Technologies, a startup company specializing in the field of plasma medicine. Lawson has served in several senior management positions, including as senior vice president of Howmedica’s Worldwide Sales and Customer Service (prior to its acquisition by Stryker Corporation) and at Stryker as senior vice president of sales, marketing and product development, president emea, and group president, International and Global Orthopedics. Lawson has also been involved as an entrepreneur in several privately held businesses. Lawson retired from Stryker in 2007 and in 2008 he formed Lawson Group LLC, which provides strategic consulting services specializing in the orthopedic medical technology field.

Quella is a senior managing director and senior operating partner in the Corporate Private Equity group of The Blackstone Group, LP. Prior to joining Blackstone in 2004, Mr. Quella was a managing director and senior operating partner with DLJ Merchant Banking Partners and CSFB Private Equity. Prior to that, Quella worked at Mercer Man-

agement Consulting and Strategic Planning Associates, its predecessor firm, where he served as a senior consultant to CEOs and senior management teams, and was co-vice chairman with shared responsibility for overall management of the firm. Quella has been a member of various Private Equity company boards and currently serves as a director of Catalent, Freescale Semiconductor and Michaels Stores.

Hal Mathews, M.D. Joins Paradigm Spine

Veteran spine surgeon Hal Mathews, M.D., M.B.A. is the new executive vice president and chief medical officer at Paradigm Spine. Dr. Mathews now has global responsibility for all medical education initiatives, surgeon/faculty training functionalities. He is in charge of the strategic management of the company’s clinical, compliance and regulatory policies, as they relate to its worldwide product portfolio of spine medical devices. Dr. Mathews is a board certified orthopedic spinal surgeon who practiced spinal surgery for 22 years. He was recruited from clinical practice by Medtronic Spine and Biologics in 2005 to become their vice president of medical affairs, and later served within the capacity of vice president of clinical affairs, ultimately becoming chief medical officer. Prior to joining Medtronic, Dr. Mathews was president of MidAtlantic Spine Specialists in Richmond and Williamsburg, VA, where he owned and practiced in a private multi-disciplinary spine surgery practice. Also, prior to joining Medtronic, Dr. Mathews was an associate clinical professor of orthopedic and neurologic surgery at Virginia Commonwealth University in Richmond, Virginia. Prior to joining Paradigm Spine, Dr. Mathews was the president of Musculoskeletal, Clinical and Regulatory Advisors, LLC. ♦

Hofmann v. Ranawat: Cementless Tibial Fixation in TKA

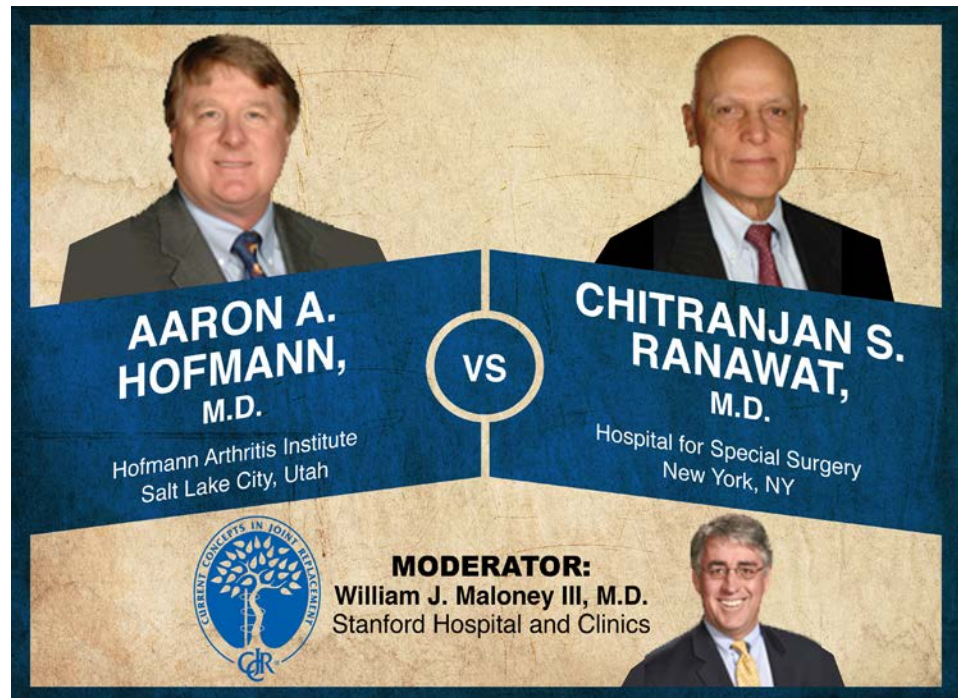
By Elizabeth Hofheinz, M.P.H., M.Ed.

“**C**ementless fixation can work, but it must be equal to or better than cement. I think it’s equal to,” asserts Aaron Hofmann. “All good things ultimately prevail,” says Chitranjan Ranawat. “And I think, like in the hip, non-cemented fixation in the knee will prevail when it becomes reproducible and cost effective.”

This week’s Orthopaedic Crossfire® debate is “Cementless Tibial Fixation in TKA [total knee arthroplasty]: A Second Coming.” For the proposition was Aaron A. Hofmann, M.D. from the Hofmann Arthritis Institute. Against the proposition was Chitranjan S. Ranawat, M.D. of Hospital for Special Surgery; moderating was William J. Maloney III, M.D. from Stanford Hospital and Clinics.

Dr. Hofmann: “I’ll discuss five points: knowing your porous coating, avoiding porous coated pegs, using biologic cement, matching the tibial slope, and avoiding thermal necrosis. Cementless fixation can work, but it must be equal to or better than cement. I think it’s equal to.”

“We have made some huge mistakes, starting in the early ‘80s, thinking that all rough surfaces will work. You must know the surface technologies—they’re not all the same. I think the more porosity it has and the rougher the micro/nano structure; the better. Surface spraying—not as good. Titanium surfaces of various degrees are better than cobalt chrome.”



Current Concepts in Joint Replacement/RRY Photo Creation

“In a study I did, side-by-side comparison in human cancellous bone—beaded cobalt chrome next to beaded titanium shows spot welding on the cobalt chrome and diffused ingrowth into the titanium. It doesn’t mean you can’t get ingrowth with cobalt chrome, but I think titanium is just more predictable. Some of the early designs had porous coated pegs. Whether it’s on the femoral component or the tibial component, if you ever have to remove these it can be difficult. Some of the porous coated tibial components have had this same problem.”

“A porous coating should be easy to remove. The bone shears off from the subchondral surface of the porous coat-

ing. You get ingrowth into the surface, but you can remove these easily. The challenge has never been on the femoral side, it’s always been on the tibial side...I can get good tibial fixation on any tibia...but should we? The proximal tibia is 76% space and 24% bone—hence the problems. You must use something like cement—either acrylic cement or biologic cement. If you don’t you can’t rebuild that subchondral plate on the tibia. We take the ground bone from the cut surface of the tibia, spread it across, and dramatically improve not only the initial contact, but the amount of bone that is next to the implant.”

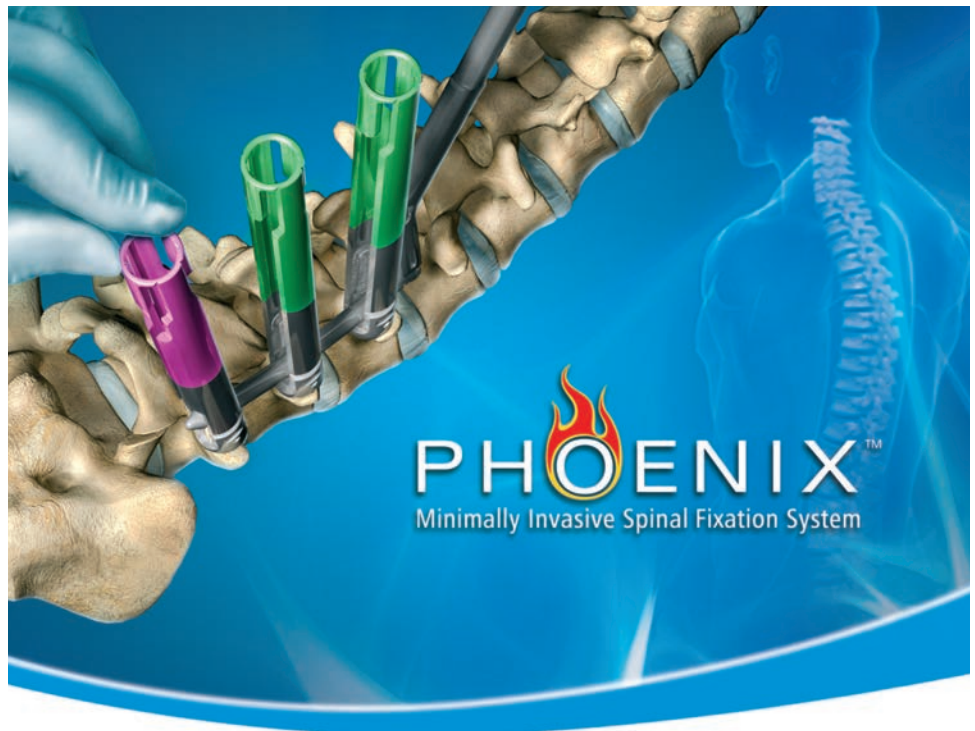
“We know from our award winning plug study looking at it with and with-

out graft that you can improve the amount of ingrowth by 67% by using this biologic cement as opposed to using nothing.”

“Matching the cut of the tibia: that was one of the other early mistakes. On tibial fixation especially, if you match the patient’s slope you can improve the weight carrying capacity of the proximal tibia by 40%. A cadaver study looking at anatomic slopes versus 0% slope basically showed us what we were seeing clinically—anatomic subsidence. Thermal necrosis occurs at 55 degrees C, so if you are smokin’ through your bone, burning the bone, there’s no way you’re ever going to get bony attachment. It can be taken down to 37 degrees by using irrigation while you’re doing it.”

“My study from 1991: no difference between patients before or after 65—you can get great fixation in these patients. When I started in 1985 89% of my patients were done cementless; it’s less than 40% now for cost reasons. The results of our 10-14 year follow up: component survival was 98% for femoral components, 98% for tibial components. Polyethylene was an issue...only 94% of those survived 10-14 years. And the patella—which was metal backing—did well [95%]. Looking at postmortem retrievals, there has always been great ingrowth. You don’t ever get more bone inside the porous coating than you have outside the porous coating.”

“So there can be good clinical results using cementless, equal to cemented, we haven’t seen loosening over time, once you have ingrowth it doesn’t retreat, and on our retrievals we found that there is a great amount of ingrowth. Whether cementless knees are back is going to depend on the manufacturers.”



orthofix.com
1-800-535-4492
SAD-1201-US © Orthofix Holdings, Inc. 12012

ORTHOFIX®

Advertisement

Dr. Ranawat: “Cemented tibial fixation is the gold standard. To judge the superiority of cement versus non-cemented fixation one has to examine the long term data, which only looks at the mechanical fixation and survivorship from that. At 10-15 years survivorship in my hands is around 94%. We have published 20-year data on the total condylar with a survivorship of 92%.”

“If I summarize the experience of 10-15 year survivorship for failure due to mechanical reasons, the number is around 90-97%. There are reports in recent literature of 15-20 year follow-up of around 90-98%. I also reviewed cementless fixation, and the best information we have is a recent paper by Gandhi—a meta-analysis—and his conclusion was that the cement fixation had better survivorship.”

“We’ve also looked at quality of function in cemented total knees and one can get 110-115 degrees most of the time; our goal is 125 degrees range of motion (ROM) because there are many activities of daily living which would require higher flexion than what we get. Recently we completed a study of 81 matched pair, fixed bearing versus mobile bearing knees—matched for age, body mass index and gender. We gave a patient administered questionnaire and found that a third of patients are quite active and participating in many sports. So based on 15-20 year data, cemented tibial fixation is reproducible, durable, has excellent survivorship, and a high degree of quality of function.”

“Although the results on non-cemented tibial fixation are improving, the overall

long term data suggests that cemented fixation is more reproducible and superior. We need prospective, randomized studies with long term follow-up to settle this issue. I have always said that in life, 'All good things ultimately prevail.' And I think, like in the hip, non-cemented fixation in the knee will prevail when it becomes reproducible and cost effective."

Moderator Maloney: "Aaron?"

Dr. Hofmann: "We both agree that there's going to be a place for cementless fixation. When I look at my own patients, the average age for my cemented knees is 76, the average age for my cementless knees is 64, so it's the younger, active group—the fastest growing segment in our patient population. I'm cementing the majority of my patients. So we know that an implant costs maybe \$100 to porous coat it, so

why is it \$1,000 more? If the price of the implants were the same—cemented and cementless—we would have a different conversation because so many more implants would be put in without cement."

Dr. Ranawat: "Two issues: Although we have a good technology, it has not been translated with the different knee designs. Also, you need to prepare the bone more precisely if you are going to use non-cemented fixation. Then there's cost. I'm hoping that things will improve and when that day comes we will have more non-cemented fixation. I use non-cemented fixation for revision total knee and in those patients you have significant damage of the metaphyseal cancellous bone because in that patient the cement doesn't work."

Moderator Maloney: "Aaron, you said in the young patient you lean towards

cementless designs. Does the data suggest that loosening is a problem in the young patient?"

Dr. Hofmann: "Not in my patients because in my patients for 25 years have been done cementless."

Moderator Maloney: "With modern design, Chit, even with designs that are 10-15 years old, was age an independent risk factor for loosening of cemented components?"

Dr. Ranawat: "If you look at the earlier data it suggests so. However, in my personal experience I don't do total knees often below age 55. Therefore, 55 and above, I don't think there is a significant issue."

Moderator Maloney: "Aaron, you discussed your bias for titanium beads over cobalt chrome beads. What are



OSTEOMED
SPINE

Rethinking Possibilities, Reshaping Lives

PrimaLOK SP's **four polyaxial grips** let you stick the landing at virtually any angle, allowing you to place the device with confidence in your preferred location.

NASS is in our home town this year, we invite you to stop by.

OSTEOMED SPINE
3885 Arapaho Rd | Addison, TX 75001
800.456.7779
www.osteomed-spine.com
info@osteomed-spine.com

COLSON A COLSON ASSOCIATE

STICK THE LANDING

Advertisement

your thoughts on some of the newer porous metals? Also, address Dr. Ranawat's comments about having to be more exacting with cementless total knee arthroplasty for those early fixation factors."

Dr. Hofmann: "I think that's true. Certainly the femoral fixation is more forgiving. You can have some gaps, some imperfections...but when you're creating a flat surface on the tibia you have to have a flat surface. So many people are used to going fast and not checking it, and there are a few extra steps you must do like checking for flatness, checking the trials and seeing if they're rocking and rolling, and then having extra fixation on your tibial component. So it is more exacting. I have residents that I've just said, 'This guy needs to cement all his knees.' And I have those guys who will slow down to the point of checking it, who I think are better candidates for doing cementless fixation. One point: not every young person should even be

considered for a cementless knee. For a smoker, I won't do a cementless knee. You only have one micron per day of ingrowth anyway, and a smoker's bone metabolism has slowed way down. I also won't go cementless on a workman's comp and most of the VA patients that are on disability."

Moderator Maloney: "You said not to porous coat the pegs—does not doing that lead to access channels for wear debris and osteolysis?"

Dr. Hofmann: "You have access channels if you have screw holes, so I think you can have a cementless device. But if you have a poly problem/backside problem it's going to track down the screw. It's actually a place to look rather than not being able to see it."

Moderator Maloney: "So Dr. Ranawat, what do you think the porous metals' role will be in cementless fixation in total knee arthroplasty? What's it going

to take to do what we did in the hip with that technology?"

Dr. Ranawat: "On the tibial side we need either a titanium trabecular metal or tantalum or the like, and some osteo-inductive/osteoconductive agents to ensure rapid bone ongrowth/ingrowth. More failures occur from soft tissue imbalance than from fixation."

Moderator Maloney: "So the name of the game in cementless fixation is maintaining initial implant stability, minimizing implant micromotion, and assuring that you've got a viable surface to ingrow. So Aaron, you do it with your bone paste, and you [Dr. Ranawat] are talking about HA (hyaluronic acid), but some way to bring all three of those factors together. Thank you, gentlemen."

◆
Please visit www.CCJR.com to register for the 2012 CCJR Winter Meeting, December 12 - 15 in Orlando, Florida.

"You may now view content from the CCJR Meetings on the CCJR Mobile™ App. Please scan the QR code to download the CCJR Mobile App to your Android or iOS mobile device, or visit www.ccjrmobile.com."



company

K2M's MESA Cleared for Kids

Kids can now benefit from K2M, Inc.'s MESA Deformity spinal system.

On September 18, the company announced additional FDA 510(k) clearance to treat adolescent idiopathic scoliosis. The pediatric clearance applies to the company's MESA Deformity ($\phi 5.5$ mm), MESA Rail Deformity ($\phi 5.5$ mm), MESA Small Stature ($\phi 4.5$ mm), and MESA Rail Small Stature ($\phi 4.5$ mm) Spinal Systems.

According to Laurel Blakemore, M.D., pediatric orthopedic surgeon with the Children's National Medical Center, "The clearance of these pedicle screw technologies is an encouraging movement forward in the treatment of pediatric spinal patients. The FDA's pediatric clearance of K2M's MESA, MESA Small Stature and Rail supports the development of technology to treat pediatric patients with severe spinal deformity."

"This clearance reflects willingness on the part of regulatory agencies around the world to clear devices and technologies that address a wide range of applications in the treatment of pediatric spinal disorders," added Behrooz Akbarnia, M.D., orthopedic surgeon and medical director, San Diego Center for Spinal Disorders.

The Rail 4D technology was introduced in July. According to the company, the technology was inspired by structural I-beam geometry and "provides an alternative to the first generation round spinal rods offered with other products

in the marketplace. Designed to address the most complex spinal curves, the Rail provides enhanced structural rigidity while maintaining a lower-profile than traditional set screw based systems."

The top-loading MESA system features the company's "Zero-Torque Technology," applying zero torsional loads, or twisting forces, to the spine when locking the screw. Offering a variety of screw types, coupled with instrumentation, the system allows surgeons the ability to one-step lock.

K2M's President and CEO, Eric Major, said the company is deeply committed to advancing care for scoliosis patients.



K2M, Inc./MESA Deformity System



K2M, Inc./MESA Deformity System

"We have developed technologies like MESA and Rail to put new capabilities into the hands of surgeons who treat the most complex spinal deformities."

—WE (September 23, 2012)

Biomet to Distribute CERAMENT Bone Filler

BONESUPPORT, the maker of an injectable bone substitute for orthopedic trauma and bone infections, has signed a multi-year distribution agreement with Biomet, Inc, a manufacturer of musculoskeletal medical products.

Biomet will have exclusive distribution rights for BONESUPPORT's proprietary CERAMENT Bone Void Filler product line in the United States and Canada for orthopedic, trauma and foot and ankle indications.

"The completion of this agreement with such a distinguished partner as Biomet is an endorsement of the CERAMENT product line," said Lloyd Diamond, CEO of BONESUPPORT. "In Biomet we have found an experienced partner dedicated to bringing innovative treatments to the world. Biomet's leadership position and strong distribution channel provide full and immediate territory coverage for CERAMENT in two critical markets, the United States and Canada, and provides an excellent platform from which we can launch future product line extensions."

Joel Higgins, vice president and general manager of Biomet Biologics, said

that he was "very excited to be partnering with BONESUPPORT to bring the CERAMENT product line to the U.S. and Canadian markets."

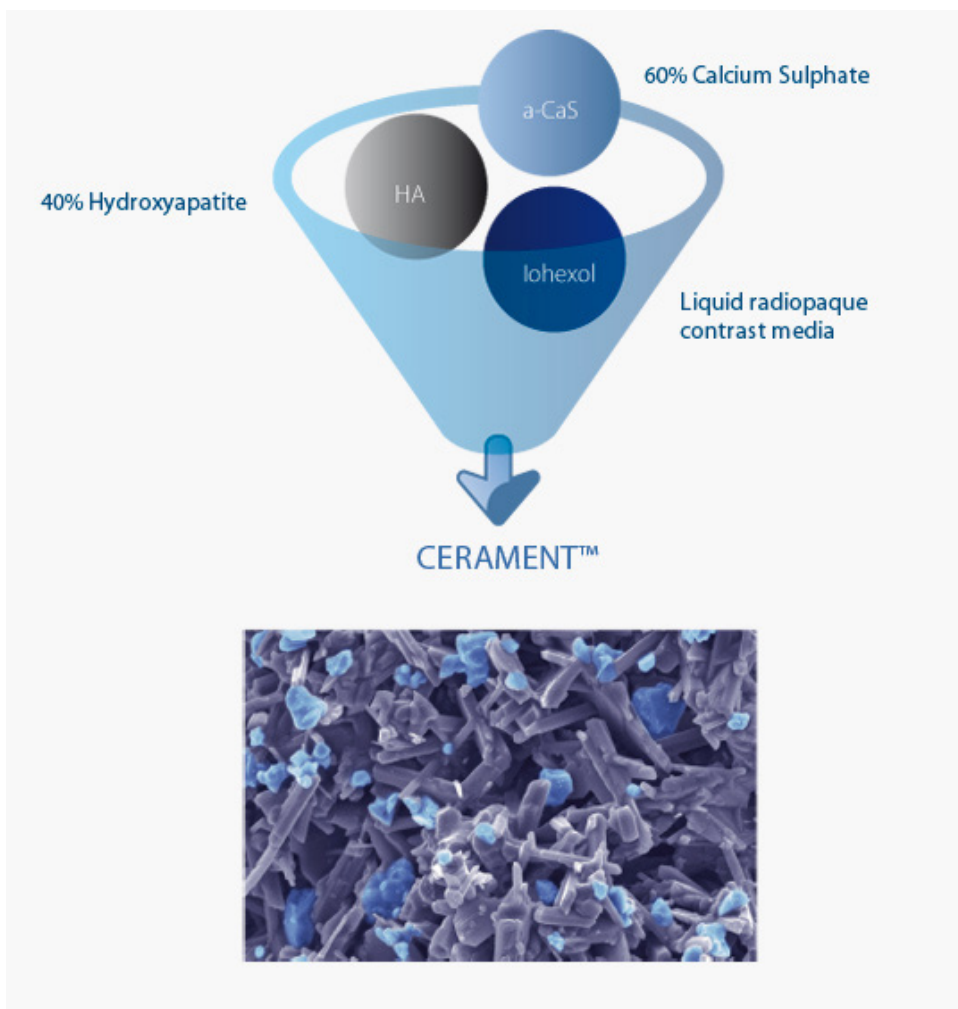
BONESUPPORT was founded in 1999 and is based in Lund, Sweden, with subsidiary locations in the U.S. and Germany. The company reports that scientific research of CERAMENT spans more than 11 years and over 45 pre-clinical, clinical and animal studies.

CERAMENT is a synthetic bioceramic bone substitute that is designed to mimic human cancellous bone. CERAMENT's particular blend of calcium sulphate and hydroxyapatite combined with liquid iodhexol creates a highly injectable, osteoconductive and bioactive material.

The cement particular formulation is designed to provide short-term resorbable support for the fracture or bone void providing rapid pain relief and stabilization. The compound will also provide longer-term osteoconductive support which enhances new bone growth. CERAMENT is a patented technology results in the unique qualities of this biomaterial.

Biomet is headquartered in Warsaw, Indiana, and its subsidiaries currently distribute products in approximately 90 countries.

—BY (September 17, 2012)



Courtesy of BONESUPPORT

legal

Miami Orthopedic Marketer Sued By Physician Investors

Internal Fixation Systems (IFS), Inc. was founded in Miami in 2007 to market and distribute orthopedic screws, plates and implants. The company claims to offer products at half the price of their competitors. By May 2011 the company began trading as an over-the-counter stock. Investors included physicians from the Miami area.

This past August a group of the 29 investors filed suit against the company, its CEO Stephen Dresnick, M.D. and former Miami Dolphin football star Bob Kuechenberg, a company director. Apparently they weren't happy with their stock plummeted from \$2.58 to a penny a share in less than a year.

According to a September 1 story in the *Miami Herald*, the investors allege that Dresnick and the company failed to

provide timely information about several matters, including a loan last spring that was an improper agreement which allowed the defendants to secretly profit from the sale of one million shares. They also allege that the company didn't quickly reveal that it was evicted from its manufacturing facility in April.

Dresnick, who took charge of the company in 2009, denied the allegations to the *Herald*. "I have never sold even one share of IFS stock and even a minimum of inquiry would have shown that to them." Dresnick, according to the company's website developed several companies, including Sterling Healthcare.

According to the company's most recent financial report noted by the *Herald*, the company lost \$1.3 million in the past six months with only \$293,000 in sales. The report said that there was "substantial doubt about our ability to continue as a going concern...We are seeking to raise capital through the sale of our securities. Without additional funding, there can be no assurances that we will be able to continue our operations."

The loan in question came from an investment company giving the investor stock that could be immediately sold, the complaint alleges. A loan company executive asked IFS to create a list of 14 potential press releases and later asked IFS' acting CFO to send him a list of proposed headlines. According to the complaint, the CFO declined the request and after meeting with the company's SEC counsel, expressed concern about the proposed loan. The counsel allegedly told the CFO that "the deal was not proper in many respects."

The CFO is not named in the complaint. But the *Herald* reports that Dresnick and others identify her as Laura Cattabriga. The complaint said she resigned on April 24, along with the vice president of sales, Ken West.

Dresnick told the *Herald* that the two "were pushed out due to poor performance" and since then "have been attempting to take control of the company."

Raymond Robinson, the lawyer for Cattabriga and West, is reported in the *Herald*, saying that wasn't true. "Neither of my clients did anything wrong." He said the two disagreed with what was happening at the company and decided to resign.

According to Robinson, both have filed suit in circuit court claiming that IFS violated their employment contracts and since both also own large amounts of stock, the lawyer is considering a federal lawsuit similar to that of the 29 investors.

Dresnick told the *Herald* that the case "is totally without merit" and was sparked by two vengeful former employees.

—WE (September 23, 2012)



www.internalfixations.com

biologics

Spine-Injured Patients Regain Sensory Function

Two of three patients in a phase I/II clinical trial of stem cells for chronic spinal cord injury have shown considerable gains in sensory function, according to Armin Curt, M.D., principal investigator who presented results at the 51st Annual Scientific Meeting of the International Spinal Cord Society in London, England. The three patients received injections of StemCells, Inc.'s HuCNS-SC purified human adult neural stem cells. Doctors transplanted three patients with a dose of 20 million cells at the site of injury four to nine months after their injuries took place.

"As with the three-month assessments, these three patients have tolerated the

cell transplantation very well, and we have no safety concerns at this point," said Curt, professor and chairman of the Spinal Cord Injury Center at Balgrist University Hospital, University of Zurich. "We are very intrigued to see that two of the three patients have gained considerable sensory function. The gains in sensation have evolved in a progressive pattern below the level of injury and are unanticipated in spinal cord injury patients with this severity of injury, suggesting that the neural stem cells are having a beneficial clinical effect. Sensory function of all these patients was stable before transplantation, so the reappearance of sensation is rather unexpected."

Stephen Huhn, M.D., Vice President of StemCells, Inc. added, "To see this kind of change in patients who truly have the worst-of-the-worst type of injury to the spinal cord is very exciting. To our knowledge, this is the first time a

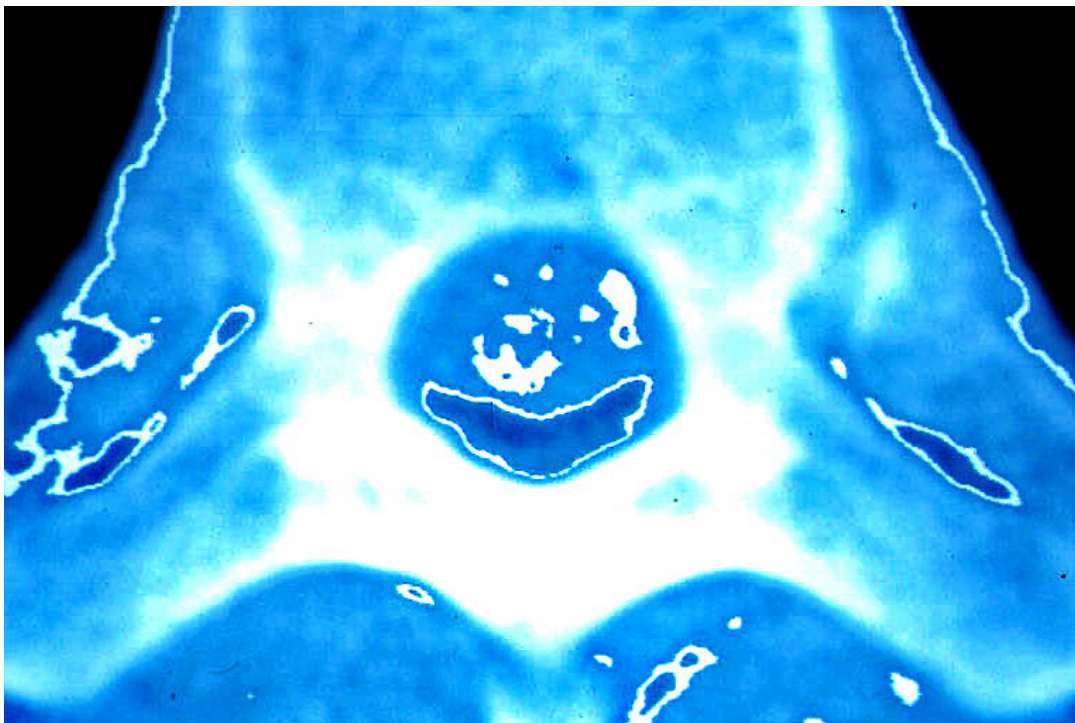
sensory change of this magnitude has been reported in patients with complete spinal cord injury following a stem cell transplantation. We clearly need to collect more data to establish efficacy, but we are encouraged. We are pushing ahead with our trial and plan to dose the first patient with an incomplete injury soon."

Patients in the study's first cohort all suffered a complete injury to the thoracic (chest-level) spinal cord. In a complete injury, there is no neurological function below the level of injury. Researchers observed changes in sensitivity to touch, heat and electrical stimuli in well-defined and consistent areas below the level of injury in two of the patients, while no changes were observed in the third patient. Tests of perception of different sensory stimuli as well as measures of electrical impulse transmission across the site of injury correlate with the clinical examination, providing independent and objective confirmation of the changes in sensory function.

Researchers are conducting the trial at Balgrist University Hospital, University of Zurich, a leading medical center for spinal cord injury and rehabilitation. The trial, now underway for the second cohort, is open for enrollment to patients in Europe, Canada and the United States. Those interested in participating in the study, should contact the study nurse either by phone at +41 44 386 39 01 or by email at stemcells.pz@balgrist.ch.

Wikimedia Commons and Michael Royon

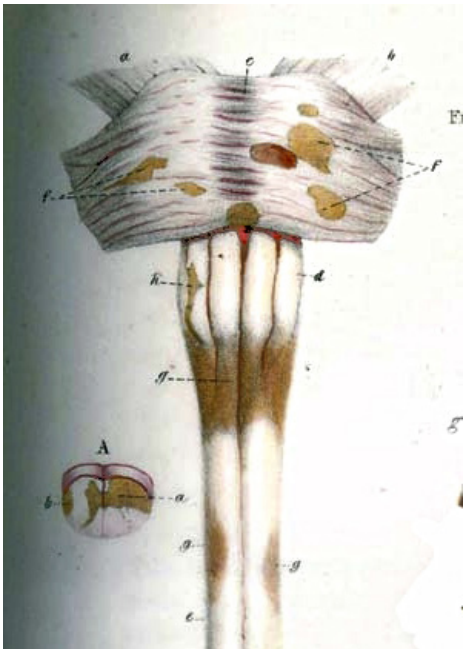
—BY (September 14, 2012)



Stem Cells Treat Multiple Sclerosis

Researchers at the Cleveland Clinic, University Hospitals Seidman Cancer Center and Case Western Reserve University believe that they have made a significant breakthrough in the use of stem cells to treat multiple sclerosis—an autoimmune disease in which the immune system attacks the myelin sheaths that surround and protect nerve cells.

They began their investigative journey by injecting human mesenchymal stem cells (MSC) into mice which had been given a mouse version of the disease. Following the injections, the mice improved but the researchers did not know why. One reason could be that the stem cells themselves, by coming in physical contact with the myelin damage, were having a healing effect. Or it could be something the stem cells were secreting into the liquid culture, or media that they were grown in, that was the key.



Wikimedia Commons and Robert Carswell (1793–1857)

The researchers discovered that it was the stem cell secretions that were bringing about the improvements when they injected the liquid the stem cells were grown in, but not the stem cells themselves, into the mice they were studying. When the mice improved, they figured it had to be the media.

Last May, the research group headed up by neurosciences professor Robert Miller, discovered that the item in the stem-cell soup that had a healing effect was a large molecule called a hepatocyte growth factor, or HGF that is secreted by stem cells. The team published their results in *Nature Neuroscience*.

When they isolated the small, medium and large molecules from the media and tried each size on the mice they found that only the large-molecule treatment had the healing effect. “The molecule that jumped out at us was HGF,” he said in the September 4 news release, because it is the right size and is made by MSCs.

Miller and his team injected HGF into the sick mice. They got better. When they blocked the receptor for HGF in the mice, they stayed sick. Miller said that this result was compelling evidence that they had found what they were looking for. “We went on to show that HGF, like the MSCs, is regulating the immune response, and it is independently promoting myelin repair in the brain.”

The local Phase 1 trial has enrolled 16 of 24 total patients, 8 of whom have completed the trial protocol, said Jeffrey Cohen, M.D., Cleveland Clinic neurologist and lead investigator of the trial. So far, the treatment seems to be working, Cohen said.

—BY (September 14, 2012)

large joints

Total Knee Not a Weight Loss Panacea?

Postop slimmer you? Perhaps not, say researchers. The team, led by Maria Inacio, M.S., a doctoral candidate from the San Diego State University/University of California, San Diego, conducted a review of the current literature to find out. Their results appear online in the journal *Clinical Orthopaedics and Related Research*, published by Springer.



Wikimedia Commons

The authors conducted a review of 12 studies meeting their criteria. They considered the studies thus far in this area to be of generally low quality with small sample sizes and poor methods, leading to a risk of bias. Overall the studies reported between 14% to 49%

of patients had lost weight a year after having a TJA (total joint arthroplasty). However, the ranges of weight loss suggested inconsistent loss and the differences in the study designs meant that overall there was no conclusive pattern. In fact, the studies showed that more patients gained weight than lost.

In a CORR Insights commentary on the manuscript, Stuart B. Goodman, M.D., Ph.D., of Stanford University said, “Obese patients frequently tell clinicians that they are overweight because their painful hips or knees limit their physical activities and their capability to ‘burn calories.’ Unfortunately, after a comprehensive analysis of the data, the answer to this important question is still unknown.”

Inacio, who is employed at Kaiser Permanente, told *OTW*, “This article is the first product from my PhD dissertation. I am currently conducting a study trying to address the questions raised by this study and bring more clarity to the issue. Regarding what else needs to be done, a better understanding of how obesity affects this special population is necessary, both pre-operatively and post-operatively. From our review of the literature it is not clear that patients should expect total knee replacements to help them lose weight. We recommend that larger high quality studies be conducted to better characterize the patients undergoing total knee replacements and their historical and post-operative weight patterns. We hope that once patient characteristics and their associations with weight patterns are understood, this information can be used by clinicians/providers to personalize weight management interventions.”

—EH (September 19, 2012)

Smith & Nephew Launches LEGION Knee

As of now, surgeons in the U.S. and Canada can take advantage of the newly launched LEGION HK Hinge Knee implant from Smith & Nephew—a product that has over 15 years of clinical history. As indicated by the company, this is the first hinged knee to be designed using normal knee kinematics, and the implant provides a new option for those patients facing difficult primary or revision knee surgery.

“This signals a real change in the hinge knee landscape,” explains Gaurav Agarwal, DSVP and general manager for Smith & Nephew’s Advanced Surgical Devices division, in the September 12, 2012 news release. “With this implant, we are not only simplifying the procedure, we are transforming these com-

plex surgeries from salvage operations to true joint-rescue procedures.”

Agarwal told *OTW*, “Revisions can be extremely challenging surgeries. With the LEGION HK, our design team was asked to create a hinge implant that restores a patient’s anatomical motion and provides joint stability in the face of extreme bone loss and compromised soft tissue. With this achievement, we also delivered a solution that offers the seamlessness and simplicity surgeons have come to expect from the LEGION family.”

The LEGION HK Hinge Knee has been designed to closely match the knee’s original anatomy while also restoring more normal function, thanks to next-generation rotating knee technology. The company notes that the design of the implant provides a more natural range of motion while maintaining an average of 96% condylar loading—a



Smith & Nephew

design feature shown to remove the stresses from the hinge link for lower wear on the hinge device.

For surgeons, the LEGION HK Hinge Knee offers simplicity and familiarity, says the company. The LEGION HK allows surgeons to seamlessly transition intraoperatively from a constrained revision implant to a hinged assembly, thus using a minimal number of instruments and the same simple, reproducible surgical technique they already know.

“The LEGION HK system is a significant leap forward in treating complex knee revision surgery,” added Dr. Kris Alden, Director of Joint Replacement at West Suburban Hospital in Chicago, in the news release. “Its kinematic and bone sparing design not only alleviates my patients’ symptoms, but also restores an almost natural knee function. Couple that with its ease of use, and it has greatly aided my practice when treating significant bone and ligamentous deficiencies.”

—EH (September 19, 2012)

“Decision Aids” Cut Joint Replacement Costs

After it introduced a series of video-based “decision aids” for people with knee and hip osteoarthritis, Group Health Cooperative, a consumer-based health care system in Spokane, Washington, saw a significant drop in the number of knee and hip replacement surgeries performed, as well as a drop in the cost of care.

As reported in the September issue of *Health Affairs*, Group Health found that when the decision aids were presented

to potential patients, there was a 38% reduction in knee replacement surgeries, a 26% reduction in hip replacement surgeries and a 12% decline in health care costs over a six month period.

David Arterburn, M.D., associate investigator at Group Health Research Institute, who conducted the study, believed to be the first to examine the impact of decision aids on health care costs and elective surgery. It is also the first major study on hip and knee osteoarthritis decision aids.

“We have long made the case that making sure patients are informed by giving them high-quality decision aids is the ethical way to practice medicine,”

said Floyd “Jack” Fowler, senior scientific advisor at the Informed Medical Decisions Foundation. “[This study] is the best demonstration that providing decision aids is both a way to improve the quality of medical care and a way to potentially reduce the costs of [care].”

More than 27 million Americans deal with osteoarthritis making joint replacement surgeries among the most common of orthopedic procedures. Annual costs for hip and knee replacement surgeries are estimated at \$15.6 billion a year.

—BY (September 17, 2012)



Wikimedia Commons and U.S. National Archives and Records Administration

Alaska Insurer Pays for Medical Tourism – To the Lower 48!

Because hip and knee replacement surgery is so expensive in Alaska, one insurance company, Premera Blue Cross Blue Shield, is paying air fare and hotel for members to receive the same treatment in Washington State at a lower cost. Jeff Davis, president of Premera in Alaska said that his firm has researched which procedures are safe for travel and can be performed less expensively in the Seattle area.

According to Rosemary Shinohsara, writing in the *MedCity News*, Premera has more than 100,000 members and about half of the Alaska insurance market. “Clients are really looking for options that maintain quality and get better control of costs,” Davis said.

Going to Seattle for procedures will be voluntary for the patients and, at the beginning, will only be offered to some of Premera’s Alaska clients—about 32,000 members including dependents. The travel benefit will be available for certain procedures, including knee and hip replacements.

Other groups are also looking outside Alaska for solutions to significantly higher in-state medical costs. The National Education Association’s (NEA) Alaska health plan, with 17,000 members in 27 school districts, contracted with a company called Bridge-Health to find doctors and hospitals outside of Alaska for such sur-

geries as knee and hip replacements, said Rhonda Kitter, the NEA health plan’s chief financial officer. The organization will set up and organize the trips for those who want to take advantage of the service.

—BY (September 14, 2012)



Wikimedia Commons and 121aoo12

Obesity Impact on TJA Poorly Understood

Do individuals who have a total joint arthroplasty (TJA) lose weight following their surgery? With obesity being one of the major risk factors leading to the need for a hip or joint replacement, and joint pain severely restricting activity, the case that weight loss will occur postoperatively as mobility improves is both logical and intuitively compelling. But is this really what happens?

To find out, Maria Inacio, a doctoral candidate from the San Diego State University of California, San Diego, and her colleagues conducted a review of 12 studies in the current literature. They organized their results into a very interesting meta analysis and the sur-

prising results are now available online in the journal *Clinical Orthopaedics and Related Research*.

Overall, Dr. Inacio and her colleagues found, between 14% and 49% of patients had lost weight a year after having a TJA. However, the ranges of weight loss are very high. To Inacio and her colleagues, this suggests and that patients are experiencing inconsistent weight loss and that the differences in study designs essentially mean that, so



Wikimedia Commons and jdodge 420

far, there is no conclusive pattern to whatever weight loss does occur.

Most amazingly, Inacio found that more patients gained weight than lost it after having a TJA

Perhaps, said the study authors, investigations of obesity and TJA are of generally low quality and suffer from small sample sizes, poor methodology and a comparatively high risk of bias.

Commenting on the study, Stuart B. Goodman, M.D., Ph.D., of Stanford University, said in a September 10 news release: “Obese patients frequently tell clinicians that they are overweight because their painful hips or knees limit their physical activities and their capability to ‘burn calories.’ Unfortunately, after a comprehensive analysis of the data, the answer to this important question is still unknown.”

Inacio and her colleagues believe that since TJAs are such a common surgery and since the results of their retrospective study failed to tease out a discernible pattern that more research in this field is warranted and, more specifically, a large representative national study would be probably be required to answer these questions definitively.

Weight loss, either to prevent the development of osteoarthritis or to reduce long-term morbidity after a hip or knee replacement is a no-brainer worthy goal. To fully understand the relationship between TJA and weight loss or gain, clinicians will have to, for now, look beyond the current literature to obtain the most accurate picture of this very important patient population

—BY (September 18, 2012)

extremities

Volleyball Shoulder Hazard Uncovered

A Dutch study of professional volleyball players has found that 25% have symptoms associated with a shoulder artery injury that could cause irreversible damage to their fingers.

In a paper in the August issue of the *American Journal of Sports Medicine* Mario Maas, M.D., senior author of the study and a radiologist at the University of Amsterdam Academic Medical Center, explained that he and his colleagues became concerned when six volleyball players “with ischemic digits and small microemboli in the digital arteries of

the dominant hand” visited their hospital in a three-month span.

“These complaints were caused by an aneurysmatic dilation of the posterior circumflex humeral artery (PCHA) with distal occlusion and digital emboli in the isolateral limb,” Maas wrote, adding that all of the patients were “elite male volleyball players active in the national top league.”

According to *Reuter’s* reporter, Kerry Grens in a September 7 article, those six patients inspired Maas and his colleagues to conduct a survey of nearly 100 players to see how many of them had warning signs associated with the same injury. Those symptoms include experiencing cold, blue-colored, or pale fingers during or immediately following a volleyball game.



Wikimedia Commons and Andrew Choy

Twenty-seven percent of the 99 male players surveyed said that they had experienced those symptoms, Grens said. Twenty-seven of them said they had experienced cold fingers during play, while 18 of them said that their digits had turned blue and 20 others said their fingers had become pale. Four participants said that they often had blue or pale fingers, and eight said that their fingers regularly became cold.

“The group is doing follow-up research to see how well their survey actually identifies people with blood clots caused by a vascular problem,” Grens said. “Their report urges doctors, especially those treating elite athletes, to actively screen for the signs of potential vascular injuries.”

—BY (September 18, 2012)

Why use a polymer barrier when natural covering is available?

We got you covered!



Advertisement

reimbursement

Hospital Affiliated Docs Paid More

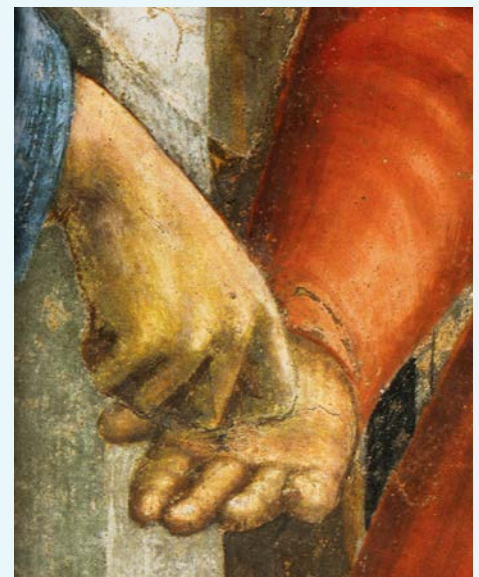
A *Wall Street Journal* report, reported by writer Molly Gamble August 27 in *Becker's Health Care*, puts the kabosh on the idea that a hospital's acquisition of physician practices increases efficiency. The report states that there has been a fivefold increase, since 2000, in the number of hospital-employed specialists who see patients in hospitals. The number of employed primary care doctors has gone up to 40% in the same time period.

The report states that doctors employed by hospitals generally receive a higher reimbursement because hospitals can negotiate larger reimbursement rates with commercial payers due to their

stronger market power. According to the report, Medicare pays more for certain procedures if they are performed at a hospital.

The *Becker's* report states that a 15-minute visit to a physician may cost Medicare about \$70 at an independent practice whereas it will cost closer to \$124 if it is billed as a hospital-outpatient service. The report cites prices from WellPoint, Inc. for spine MRIs in Nevada where the procedure costs \$319 to \$742 at a free-standing clinic, but \$1,591 to \$2,226 at a hospital.

Becker's quotes Juan Davila, senior vice president for network management at Blue Shield of California, as saying, “there is a tangible, or sometimes really, really high increase in what we pay doctors once a group links up with a hospital system.” Richard Umbdenstock, CEO of the American Hospital



Wikimedia Commons and Saiko

Association, said, “You put a hospital name on something, and the expectations change immediately,” according to the report.

—BY (September 17, 2012)

trauma

NFL Funds Concussion Research

With the help of a grant of \$100,000, the intersection of football and concussion will be studied at the Concussion Management Clinic in the Department of Orthopaedics in the University at Buffalo (UB) School of Medicine and Biomedical Sciences. The question to be answered is: when can an athlete who has had a concussion safely return to play.

The award is given by NFL Charities, the charitable foundation of the Nation-

al Football League owners, who are seeking the most objective, scientific method of determining when an athlete who has had a concussion can play the game again. The grant to UB is one of 15 totaling \$1.5 million that NFL Charities is providing to researchers nationwide to support sports-related medical research on concussion/traumatic brain injury and cardiovascular medicine.

“Concussion itself poses little risk if it is properly managed; the only risk acutely is hemorrhage, which is generally detected through CT scans,” said John Leddy, M.D., director of UB’s Concussion Management Clinic. “However, return to play before complete recovery involves much more serious risk.

Therefore, it is important that a systematic, scientifically based return-to-play protocol be established and that it is proven to be valid and reliable. This is what we will be doing with this grant.”

At present team physicians often rely on subjective assessments of an athlete’s ability to play without experiencing symptoms. Over the next 18 months, the UB researchers will test between 35 and 50 athletes from the Buffalo Bills, the Buffalo Sabres and athletes from Western New York colleges, including UB, who sustain concussions in the 2012-2013 season, as well as healthy control subjects.

—BY (September 18, 2012)

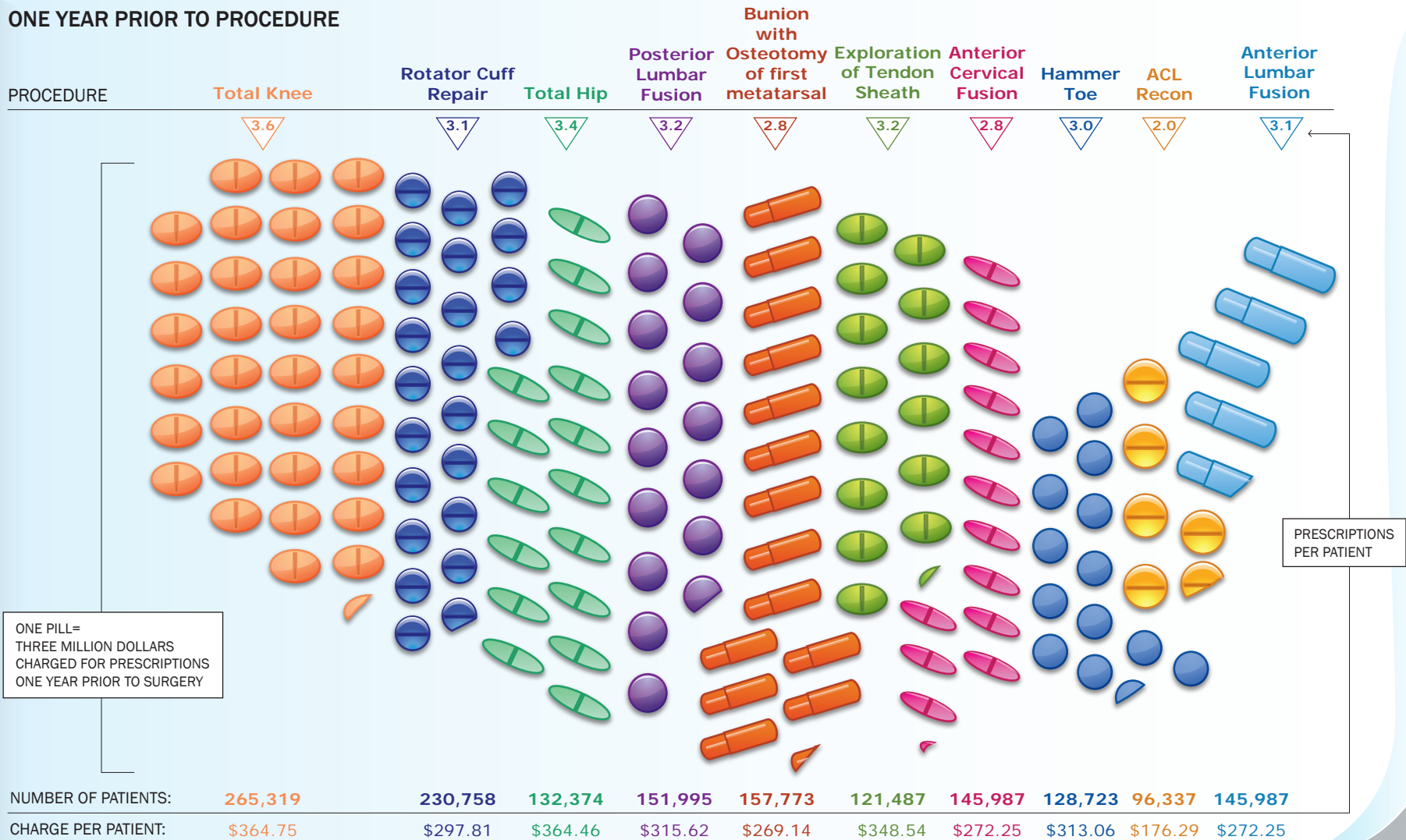


Wikimedia Commons and Keith Allison

Drug Data

NOW AVAILABLE! www.pearliverinc.com
For more information contact:
Scott Ellison-260.468.3636 | scott@pearliverinc.com

ONE YEAR PRIOR TO PROCEDURE



Orthopedics This Week | RRY Publications LLC

Main Contact Information:
RRY Publications LLC
 116 Ivywood Lane • Wayne, PA 19087
 TOLL FREE: 1-888-749-2153
 Fax: 610-260-6451

Robin R. Young, CFA
 Editor and Publisher
 robin@ryortho.com

Elizabeth Hofheinz, M.P.H., M.Ed.
 Senior Writer
 elizabeth@ryortho.com

Walter Eisner
 Senior Writer
 walter@ryortho.com

Biloiné W. Young
 Writer
 bgwy@msn.com

Tom Bishow
 Vice President of Sales
 tom@ryortho.com

Suzanne Kirchner
 Production Manager
 susanne@ryortho.com

Jayme Johnson
 Production Coordinator
 jayme@ryortho.com

Dana Bader
 Graphic Designer
 dana@ryortho.com



Don't miss your chance!
Advertise with Orthopedics This Week

Orthopedics This Week

Click Here for more details or email tom@ryortho.com
 Tom Bishow | 410.356.2455 (office) or 410.608.1697 (cell)