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*"Even duh finest suit lives a life.
You can mend and patch, but
You nevu' stitch away death."
- Louis Fischer -*

*"Zaydeh," to his grandkids,
And a helluva Brooklyn tailor
זצ"ל
(May his righteous memory be a blessing)*

The distance between confidence and catastrophe turned out to be quite small, basically the thickness of an artery wall. Dr. Martin Fischer ignored the blood trickling down his leg and leaned against the operating table to steady his hands. As his fingers moved in a synchronized blur trying to stem the red tide, his muffled voice was stuck in a loop. "Jesus, that's a lot a blood. *Jesus...*"

Jesus was an interesting expletive for an agnostic Jew and secular surgeon, but Marty had been put on notice: one more F-bomb in the O.R., and he'd be right back in that bullshit sensitivity class.

Still, it was hard for him to watch his mouth and his hemorrhaging patient at the same time. Sadie Greenberg's blood pressure and regular heart rate were reassuring for the moment, but all moments pass, and

at this rate of blood loss, so would Sadie.

He sucked his lower lip against his teeth. Yeah, a lot of blood.

The surgery was supposed to be a straightforward hip revision, a simple change of the cracked ceramic *acetabulum*, the artificial hip cup in her pelvis. The ball and metal stem, firmly attached to her femur and in perfect shape, could be left in place. But this shattered prototype socket, not even two years old, looked exactly like two other patients who had enrolled in the Novacon study, and whose cups had already failed.

This shouldn't be happening.

Marty glared into the wound. He'd have to halt the study, but that call could wait.

Right now, his focus was on Sadie, and had her surgical case gone as expected, it should have taken a quick two hours tops. Her preoperative blood count had been rock stable, so Marty hadn't a clue that disaster lay waiting below the thick fascia, the muscular envelope surrounding her hip.

The procedure had started like any other: Marty's favorite Spotify channel, *Old New York Jew Radio*, played in the background while the scrub nurse, Lauren, chatted with Marty about weekend plans. Neil Diamond's "Sweet Caroline" floated on the filtered air as Marty's scalpel went to work, separating cellular neighbor from neighbor. A thin line of blood followed the blade as if Marty had painted it on her skin with a fine-tipped brush.

Lauren wordlessly handed Marty's brand-new intern a sponge and the suction catheter but addressed Marty. "You really gonna hole up here all weekend and work on writing grants?"

Without looking up from the deepening wound, Marty took the retractor she'd placed in his hand and spread the tissues. "Yep. Just me, my keyboard, and infinite hope. I'm one revision away from an NIH grant that would fund our lab for years." He peeked up at her. "We need that funding."

"Let me get this straight. You work all day and night in the hopes you get to work even harder?"

"It's why I chose academic medicine—research, teaching, *and* healing. Besides, I like work. What would you suggest I do?"

"You've been living in the Northwest for ten years. Take a hike. Get outside and smell the cedar."

Marty gently nudged the intern's suction catheter deeper into the

wound and muttered, "Right here." The second pair of hands were always a welcome addition, and now that Marty could see better, he added, "Atta boy."

An audible pop could be heard across the room as Marty snipped a thick band of scar tissue, a leftover from Sadie's previous surgery. "Lauren, you make me sound like a neurotic hamster on a wheel."

His statement hung for a beat or two until she muttered, "If the fur fits."

Marty lifted his head and locked eyes on Lauren. The intern, who hadn't worked with Marty before, pulled his head out of the line of fire, anticipating the inevitable tongue-lashing. She'd just sassed the captain on the bridge of his own ship.

Marty's eyes smiled above his mask. "Tell you what, you keep my cedar chips clean and my water fresh, and I promise to stay off the squeaky wheel when you're sleeping."

Lauren stifled her laugh. "The hell you will. You drag us in here all the time for your crazy midnight cases."

Marty brought his focus back to the incision and shrugged. "Trauma's like a vampire. She loves the night."

With steady hands, Marty made his way toward Sadie's cracked cup, all according to plan, until his blade bit into the last fascial layer, and a rush of red reminded Marty that in surgery, all plans were aspirational. A high-pressure pocket of blood took advantage of the newly-made exit and soaked the field in a blink.

"Music off!" Marty's raised volume and pitch had the desired effect, the team's immediate attention.

The problem was obvious, even before the gore hit his shoe. That cracked cup must have sliced open an artery, and by the look of it, a big one.

In a single knife stroke, Marty had erased the potentially life-saving tamponade effect, where bleeding in a closed cavity begets pressure, and pressure stops bleeding. The first sign of trouble was the trouble itself, and a random pleat in the surgical sheets was funneling unhealthy quantities of Sadie's life down his left leg.

Dammit.

Eighteen months earlier, Sadie had been one of his first patients to enroll in the Novacon study and have her worn-out hip replaced with Novacon's shiny prototype, ceramic-on-ceramic prosthesis, one not yet available on the market. Her bright eyes practically sparkled when she signed the study consent. She was "helping science." Now the damn

cup lay in pieces, artery-piercing pieces. And poor Sadie Greenberg lay on the operating table silently pouring her heart out to him.

At eighty-three, she'd need every drop of that blood to survive. As always, the unbidden numbers lined up in his head. Seventy milliliters of blood per kilogram meant her fifty-three-kilo frame held 3.7 liters of sanguine life. The typically blue, now crimson, surgical drapes surrounding the incision, already soaked up a good twenty-five percent of that. She couldn't afford to lose much more.

He pulled his lips into a tight ball. It wasn't the dry numbers in his head that carried life to her trillion-plus cells; it was the red stuff on the floor.

The intern buzzed the suction catheter in and around the wound like a giant metal mosquito.

Marty grabbed it and threw it across the drapes. "Are you trying to kill her?"

The first-year orthopedic trainee pulled his hands back like he'd touched a live wire.

Marty proffered a quick nod, half apology, half reassurance before uttering the surgeon's ironic credo. "It's okay. All bleeding stops—eventually."

The intern didn't look reassured.

Good, because neither was Marty.

Teaching mid-disaster was part of every university practice, and he liked teaching but he liked living patients, even more, so he'd save the talk for later.

Marty's hot-tipped electrocautery, powerless against the red flood, was the next instrument to be tossed aside before he turned to nature's own technology: pressure. Recreate the tamponade.

He grabbed a surgical sponge from the back table and crammed it into the wound. As Dr. Lenny Weingard, his old Chicago professor, used to shout past his squinting tic, "A firm hand on a leaky vessel saves more lives than any heart-lung machine. Hold pressure, goddammit!"

Lauren handed him one sponge after another, and Marty crammed them into the open cavity, flinching as a shard of ultra-hardened glass pierced his gloved finger. "Fucking ceramics!"

He made a mental note to bring the sensitivity instructor's favorite donuts to the next "Why We Don't Say 'Fuck' in the O.R." class. Northwest sensibilities weren't ready for Marty's Borough Park lexicon. You can take the boy outta Brooklyn—sorta.

The bleeding finally slowed under the tight crimson sponges, and Marty's shoulders relaxed. Pressure relieving pressure.

Peeking over the drape at the anesthesia team, Marty saw hands flying and bags of pre-matched blood being hung. He'd gotten temporary control of the leak. Now it was their turn to refill Sadie's tank.

He nodded to himself. The long-dead Weingard, that curmudgeonly bastard, was right—again. Who knew? Maybe Marty's voice would ring forward in his own students' heads. Keeping his hand securely on the sponges, he took a moment to check on his intern, who, holding his bloody gloves to his chest, looked like he'd just shit his scrubs.

Marty gently guided the younger surgeon's hand to the packed incision. "Retreat's not an option. Put pressure right here." And then whispered, more gently than Weingard ever could, "Goddammit."

The intern shuddered as the saturated sponges spit red rivulets between his fingers.

"You'll get used to it." Marty pointed toward the frenzied anesthesia team at the head of the table, literally squeezing the bagfuls of blood and clotting factors into the octogenarian. "When the dam bursts, our job is to control the flood and let them catch up."

The anesthesiologist finally peeked over the drape. "Her blood pressure's in a better place. I think you can give it a look."

One by one, Marty peeled back the sponges, carefully placing claw-shaped, metal retractors deeper and deeper into the flesh in search of the leaky culprit. The fourth sponge turned out to be the hero. As Marty lifted the edge, a red geyser hit him in the chest.

Lauren wordlessly pressed a hemostat into Marty's raised left hand. Disregarding the spatter on his gown, Marty pushed the steel clamp through the red plume. He felt a click as the tip made contact with a flint-hard fragment. "There you are." Opening the jaws and pushing a bit further, he squeezed the ringed handles. "Got it."

A sickle-shaped sliver emerged in the jaws of the clamp, and he immediately shoved the sponge back in place. This woman sure knew how to bleed.

Marty gave the anesthesiologists more time to catch up and held the knife-edged chip at eye level so B.J. Watts, half-cowering in the back of the operating room, could see it. Implant companies always made their reps available in the O.R. to answer questions about complex equipment. But B.J. was more than a rep. Novacon had sent him to help manage the corporate side of this expensive study. More minder

than salesman, B.J.'s tiresome presence gave testimony to the fact that Novacon had much more at stake than Marty's measly 2.6 million-dollar study grant. B.J. kept crowing about the "bold, brilliant design" and the "billions" it would bring. B.J., so full of B's and bullshit. Since their first meeting, Marty had spent much of his spare time in search of the perfect stick to scrape B.J. off his shoe.

He held the fragment higher. "Is this what you guys meant by cutting edge?"

"It's an anomaly."

Marty tried to count to ten, as his mother had taught him, but failed at two. "Anomaly? I put over two hundred of your piece-of-shit anomalies in living, breathing people. This lady's someone's grandmother."

B.J. had no idea when to shut up. "They were lab tested. Ten million cycles."

"Ten million?" Again, the numbers in his head. "Let's see, the average person walks five-thousand steps a day. To get to Novacon's thirty-year guarantee," Marty paused for a heartbeat. "That's fifty-four million cycles. We're barely eighteen months into the study and we've already had three patients with cracked cups. That a fluke?"

Throwing the shard on the back table, Marty barked, "Hold the pieces for my lab. I'll have our own engineers study the *fucking* cup!" He caught the horrified look on the circulating nurse's face. She hadn't worked with him before.

He bit his lip and focused on the wound. In for a donut, in for a dozen. God, he hated that class.

Marty turned back to his intern, who dutifully held pressure on the sponges. "My turn." Nudging the younger surgeon out of the way, he yanked out the last sponge and thrust his right hand into the wound, pinching the deep femoral artery between thumb and index finger like it was a snake. Lauren slapped a Satinsky side-biter clamp in Marty's free hand, and just past his fingers, he felt the jaws close around the torn stump of the arterial branch. The bleeding stopped. Back in control, Marty started breathing again and looked at his intern. "Let's see you oversee the bleeder."

He patiently watched the intern's shaky hand slip the last knot into place. Had it only been fifteen years since those were his trembling fingers? Marty slowly released the clamp, and the sutures held fast. He smiled under his mask. "Well, that doesn't suck."

The intern exhaled too, apparently satisfied he hadn't killed anyone.

As Sadie's vital signs rebounded all the way to survivable, Marty felt the pulse in his neck slow with hers. He scanned the rest of the surgical team. None of them seemed to notice the sweat trickling down his back. Good. Fear in the O.R. was contagious.

He peeked over the drape at the anesthesiologist and whispered, "thanks," before lifting his closed hand to Lauren for a bloody fist bump. "I think she's had enough for now. We'll close her up and leave a new prosthesis for another day. A little R & R in the ICU will do her good."

He leaned in toward the intern's ear. "It's always better to be lucky than good."

The intern's eyes seemed to reflect that what he'd witnessed involved way more than luck.

Once they had Sadie tucked safely in the ICU, the anesthesiologist pulled Marty aside, his creased brow far from reassuring. "I don't know, Marty, she's already had two previous M.I.'s and with that kind of drop in pressure..."

Marty nodded but never looked up from his blood-covered shoe. "Her cardiologist said they were pretty minor heart attacks. Look, you did a great job. We'll see how she does overnight."

The anesthesiologist was right. When her labs came back, they confirmed a third heart attack on the table. Marty was at her bedside two days later, when intubated and comatose, her struggling heart gave out. Marty reached up to calm his twitching eyelid.

Even though Sadie Greenberg was tough, her body had been sorely tested, and it was his fault she failed the final exam.

"You can't undo death," Weingard's ghost punched through Marty's reverie. "but you sure as hell can learn from it!"

And that was exactly what Marty planned to do. Investigate the shit out of this disaster.

His father's ritual dinnertime question echoed in his head. "Who have you helped today, and who have you hurt?" Marty swallowed hard. One ghost after another, he could hardly catch his breath.

He knew he couldn't help Novacon. Willfully deaf and hell-bent to market their under-examined ceramics, they'd moved ahead with a full production run of this hip. Worse than that, they were actively recruiting surgeons to ski-weekend courses on how to implant it.

In the modern world of medical implants, there was always some kind of "Nex-Gen" even as the data on the latest "Last-Gen" was ignored. Medicine had become a market, a buy-and-sell no different

than high-end sneakers or late-model cars. Sure, Novacon could issue a recall, but there was a hell of a difference between a Chevy door latch and your grandmother's hip.

As far as who he'd hurt, Sadie Greenberg's family might have had something to say about that.

Standing at Sadie's bedside long after they'd turned the ventilator off, he let out a staccato sigh. All funding came with strings. These corporate grants, however, felt more spider-webby than anything from the NIH.

Novacon Industries answered to shareholders, not science. To medical device companies, like Novacon, patients were dollars, and surgeons were debit cards. The more surgeons in their wallets, the more cash in their coffers.

Marty took little solace in the fact that he hadn't been an easy sell. Novacon had knocked three times in their effort to win him over. At first, B.J. told him his reputation and surgical skills made him the perfect professor to study a new hip design. A hip that went even further than their competitors to conquer the brittle ceramic cup problem and eliminate the microscopic wear-particles that eventually doomed all plastic and metal prostheses.

Wary of B.J.'s slick hair and slicker suit, he politely declined. Marty was less polite when B.J. returned with pie-in-the-sky promises of a "hundred-year-hip," and an offer of private jet trips to speak at conferences. "Is B.J. your name, or a service you provide?"

The third knock, however, was a bullseye. B.J. returned with an unsigned check, enough funding to keep Marty's failing lab afloat for five more years. Federal grants, at their lowest point in decades, had been hard to score. If he didn't take this industry money, he'd be laying off his lab techs by Christmas.

Hard-working and loyal, they depended on him. And hey, maybe Novacon was right, maybe they'd overcome the inherently brittle nature of ceramics. A hip that could last a younger patient's lifetime would help millions. Apparently, Marty hadn't been vaccinated against the justification virus.

He looked at Sadie in the bed, motionless. Simple fact, she died due to Marty's effort to keep his lab alive. He held her cooling hand for the briefest moment before heading to the waiting room and her expectant family.