# Oral Contrast – One Bitter Liquid, A Range of Repercussions

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For years, the Richland Memorial Hospital Imaging Department has used Gastrografin® to opacify the bowel during abdominal CT-Scans. A scourge to every GI patient having a CT scan, the drinking of Gastrografin is especially irritating to cancer patients, many of whom have periodic scans during the course of their treatment and follow-ups.

"The amount (of Gastrografin) to be consumed doesn't make a difference," Director of Medical Imaging Jeff Lee said, "When something is horrible to drink, you dread every sip you have to take. Many patients have difficulty adhering strictly to the drinking protocol."

When patients struggled, technologists were forced to coax patients in the waiting room to drink the right amount in the hour before the scan. These hand-holding exercises invariably disrupted Imaging's tightly scheduled days. "A tech might have to rush through or skip lunch," Lee said. "A 30-minute backlog in our department can snowball, throwing off the entire day."

According to Lee, almost every patient given Gastrografin had a difficult time drinking it and keeping it down. They tried mixing Gastrografin with KOOL-AID®, an effort Lee called "a disaster" because the powdered drink mix wasn't designed to mask the taste of another substance.

When a patient was unable to drink the prescribed dose of contrast within specified time frames, the result was often an incompletely opacified bowel, which in some cases led to an image lacking sufficient detail.

When that happened, the radiologist analyzing the image sometimes had to order a re-scan, an unwelcome prospect for patients who were likely agitated already and dealing with pain or discomfort.

## The imaging team searches for a palatable solution

Lee and his team faced the same challenge with iodinated oral contrast shared by imaging departments everywhere.



#### **Richland Memorial Hospital Imaging Department**

Richland Memorial Hospital serves 60,000 people in eight Southeastern Illinois counties and is the only full-service hospital in a 30-mile radius. The hospital's busy Department of Imaging serves an average of 70 outpatients, eight hours per day, Monday through Friday. The department also serves inpatients and patients treated in the emergency room.

Since 2011, this busy hospital's imaging service has been managed by Director of Medical Imaging, Jeff Lee, who joined the hospital after years of operating his own ultrasound business.

"We know how bitter Gastrografin is, and no drink, no matter how sweet, can mask that taste," Lee said. But when I received a Breeza® flavored beverage brochure in the mail, I decided to give it to our team of experts – our techs, to look over. They said, 'Let's give Breeza a try."

"The only way to find out how Breeza worked was to mix it with Gastrografin and try it for ourselves. All of us know what Gastrografin tastes like, and when we tried it with Breeza, we found that it was finally palatable. From that point, using Breeza was a done deal."

(over)

### Patients weigh in on the new protocol

In March of 2013, Lee's staff began mixing Gastrografin with Breeza for patients who needed scans with oral contrast. Lee noticed an immediate change in patients' reactions. No longer did they regularly complain about drinking Gastrografin; and the response was heartening from the toughest audience of all – cancer patients.

"Someone who comes in for a screening for a problem like diverticulitis probably hasn't tasted oral contrast before and has nothing else to compare it to," Lee said. Cancer patients, though, often have repeated scans during their treatment and therefore could compare the oral contrast mixed with Breeza to the contrast solution mixed with KOOL-AID. "They told us it's a night and day difference," Lee said.

Since the imaging team began mixing Gastrografin with Breeza, Lee estimates that 50 percent fewer abdominal scans have been deemed inadequate by radiologists because of incomplete bowel opacification.

Now most patients easily consume two 500-ml bottles of contrast mix in the hour before their tests, as well as a much smaller amount just before the scan. Lee attributes this success to Breeza's flavor and effectiveness as a masking agent.

### A positive impact on the imaging department's operations and expenses

Technologists no longer have to interrupt their routines and schedules to beg patients to drink Gastrografin. "In some cases, we actually have to encourage patients to slow down their drinking a bit to absorb the contrast properly," Lee said.

His technologists now spend more time overseeing scans, attending to patients and sometimes working additional scans into their schedules. With fewer interruptions and delays, most days clock in at eight hours, which means fewer overtime hours for technologists, who are compensated hourly.

In addition to reducing overtime pay, the imaging department realizes significant cost savings from the 50 percent decrease in re-scans.

"When a radiologist orders a re-scan, we have to repeat the test free of charge at the same cost as the initial scan," Lee said. "That's money our department never recoups." With abdominal CT-Scans in the U.S. costing \$960 on average<sup>1</sup>, avoiding just one re-scan per week projects to save an imaging department at least \$50,000 per year, possibly more if multiple re-scans per week are common.

#### A win for patients and the imaging team

In his current role, as well as when he ran his company, Lee considers providing patients with an exceptional experience his number-one responsibility. "Patient satisfaction is paramount," Lee said. "What we're doing in our department and at the hospital to increase patient satisfaction isn't just tied to reimbursements; it's just the right thing to do."

The benefits of increased patient satisfaction, more efficient operations and reduced costs have made a big impression on Jeff Lee, as a healthcare administrator and as a business person.

When he managed his ultrasound company, Lee prioritized patient satisfaction but also stayed laser-focused on controlling the costs of the business, as he does at Richland Memorial Hospital.

"At around \$3.00 per bottle, Breeza is kind of pricey,"
Lee said. He understands how administrators and busy
hospitals might dismiss Breeza because ordering large
quantities can add up. "But when you compare the price
of Breeza per bottle to the total cost of a CT re-scan, it's
actually quite inexpensive."

Lee added, "I would tell anyone who is skeptical about the cost of Breeza that the boost in patient satisfaction alone makes investing in Breeza a no-brainer."

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<sup>1.</sup> http://www.huffingtonpost.com/d-brad-wright/the-price-of-diagnostic-i\_b\_361934.html

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