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Some years ago orthopedic surgeon Craig B. DuMond twice operated on a wrong leg. Imagining myself in his shoes, I started thinking about wrong-site surgery.

I soon realized that most errors result from faulty transmission of information. The patient first sees a G. P. By the end of the visit both know the location of the patient's problem. But the site information is then transferred to paper or electronics and then transferred back to the patient's skin before the operation. **Each transfer may be wrong.** (Recently my dentist looked at my dental X-ray, then briefly ground a tooth on the wrong side of my mouth before catching his error.)

So eliminate the transfers. **The diagnosing G. P., under the eye of the patient, should mark the location of the trouble, and that mark would rule all the way to the operation.**¹ As I wrote in an article that the New England Journal of Medicine rejected in 2002, **"The patient's skin cannot be lost, confused with that of another patient or put on back to front."**

Should the mark even so be in the wrong place many people would see it before the surgery and be likely to note the error.

Having the mark on the patient from the first diagnosis would give it great authority, perhaps even enough to cause second thoughts in a surgeon, typically a self-confident person, who knows (wrongly) where the operation should be.

Suppose the G. P. marks a hip and the specialist decides that the trouble is at the knee. The specialist crosses out the G. P.'s mark and puts his own at the knee, **and the patient sees him do it.** Because one cannot unambiguously cross out an "X" the original mark should be a bulls eye or a little circle.

Current safeguards are designed to catch the errors in mistransmitted information, and do it quite well. Talk to people; some will have seen erroneous site information on their charts, where the "official" nature of paper records can give them undeserved trust -- yet the incidence of wrong-site surgery is only 600 or so cases per year in the USA.

But the safeguards sometimes fail. Further, repeated questioning of the patient is a distraction that takes time and can itself lead to mistakes.

I once received an incision misplaced by several centimeters. Discovering a painful bulge in my left abdomen, I had gone to an emergency room. "Hernia," said the duty M. D. "See a surgeon." The surgeon had me opened up before realizing that the hernia was femoral, not inguinal. **Had the E. R. man marked my skin at the location of the bulge,**

the surgeon would not have had his surprise.

¹ Because current skin markings fade quickly the G. P. will give the patient a skin marker with instructions to trace the mark as it fades. Perhaps histochemists could make dyes that penetrate the wear-layer of the skin and last, say, two months. (They might sell to body-decorators.) For those who value privacy, the dye could be fluorescent, visible only under UV light.