Mark S. Sanders MD FACS
Presurgical Lower Extremity Osteotomy Information

All surgery carries risks. This document has been compiled to educate patients on the risks/complications of realignment osteotomies in the lower extremity. At the Sanders Clinic we recognize these risks and take preemptive action to minimize their occurrence. **THE MOST IMPORTANT RISK FACTOR FOR POST OPERATIVE COMPLICATIONS IS ENTIRELY UNDER THE PATIENT'S CONTROL. <u>THESE PROCEDURES CAN NOT BE SUCESSFULLY DONE ON THOSE THAT CONTINUE TO USE TOBACCO OF ANY FORM.</u>**

1. **Nerve or Vessel injury.** These are uncommon complications. Avoidance of these problems is best accomplished by careful surgical technique, and minimum use of a tourniquet. Immediate recognition and repair of an injured structure in indicated in such cases.

2. **Thrombosis/embolism.** These complications can occur with greater frequency and are best avoided. It has been shown that their occurrence is reduced when spinal anesthesia is used. Furthermore use of compression stocking, foot pumps and mechanical venous compression is our routine. Certain patients with greater risk will be placed on blood thinning medication. All patients must discontinue the use of tobacco and all patients must be up walking no later than the day after their procedure.

3. **Disturbed wound healing.** This problem is preemptively dealt with by assuring that patients are on a high protein diet with adequate caloric intake. In the absence of positive evidence we had abandoned the used of platelet rich plasma.

4. **Early or late infection.** This can occur in less than 1% of patients when antibiotics are given before surgery. The incidence is further reduced by preoperatively culturing the noses of patients looking for Staphylococcus bacteria. Those patients who harbor these bacteria can be treated with nasal antibiotic ointment and a different preoperative antibiotic. Furthermore, regular care of the surgical wound by showering with Hibiclens soap, and then placement of Triple Antibiotic ointment will keep the wound from being colonized.

(Continued)

5. **Delayed Bone healing**. Like all surgical problems this is best dealt with by proper patient selection and proper surgical technique for these procedures. Former smokers or those or large corrections greater than 13 millimeters or degrees require bone grafting from the hip for “opening wedge” osteotomy of the tibia. Bone graft is almost always needed for “opening wedge” osteotomy of the femur, except in cases were only a small correction is necessary. “Closing wedge” and rotational osteotomies do not require bone grafts. In all cases we use Platelet Rich Plasma (PRP) which appears to accelerate bone healing. In cases where a potential problem is identified we will use biological products such as Bone Morphogenic Protein.

6. **Hematoma.** This is blood that accumulates in the wound and may require a return trip to the operating room for evacuation. We strive to prevent this problem by taking down the tourniquet to electrocoagulate the small bleeding vessels in all surgeries, use of Platelet Rich Plasma to jump start the coagulation and healing process, and an adequate cold/compression dressing. This device is called the Cryocuff* and is a mandatory part of the process.

7. **Minimal lengthening of the operated lower extremity.** This occurs in all opening wedge osteotomies. It is rarely problematic for the patient and in these cases, often returns the limb to the length it was before the arthritic process wore away the articular cartilage.

8. **Partial weight bearing for six weeks postoperatively and the need for range of motion exercises**. After surgery two handed support with crutches is necessary for at least six weeks. Some patients require an extra week or two. All surgical procedures are associated with stiffness in the part, and attention must be paid from the day of surgery to obtaining and maintaining full motion of the knee. This is much easier to obtain in the Recovery Room than it is to obtain in the Physical Therapy Department after several weeks of immobilization.

(Continued)

9. **Over or under correction**. The correction of a deformity is a complex procedure. Not commonly, X-rays may show that the deformed limb has been over corrected or under corrected. When this happens, its is best to correct the problem immediately before the bone has healed. The screws in the TOMOFIX plate are inserted such that they can be easily changed without much trouble beyond a second anesthetic. All efforts are taken to prevent this problem, and such efforts include digital preoperative planning, and intraoperative fluoroscopic control, but similar to fitting a wedding dress, a second fitting sometimes is necessary.

10. **Hardware sometimes needs to be removed**. In most cases in which the TOMOFIX hardware is installed, it doesn't bother the patients after the bone healed. In persons with very thin skin, it is sometimes prominent and patients want to have the offending metal plate that has all ready done it job removed. Removal is done in the outpatient surgery section of the hospital, and one can return to most activities within a few days and sports after six to eight weeks.

11. **Medical Complications**. Surgery always carries risk of complications remote to the operated part. At the Sanders clinic, we do not regularly do hip replacements on young people. Older people may have heart, circulatory, pulmonary, kidney, arterial, venus, and diabetic problems. Our total hip replacement patients typically are seen before surgery by an internal medicine doctor; undergo vascular tests read by a vascular surgeon, and frequently by a cardiologist also. Spinal anesthesia reduces the incidence of medical complications, but despite our best efforts, they still occur.

I have read this document and have had my questions answered by Dr. Sanders or his staff. I agree to completely avoid any and all tobacco products from this day forward.

_____
Patient signature

_____
Date