

## **P.I.T.S.A (Personalized Instrument in Total Shoulder Arthroplasty) study**

Dear participant,

Thank you for considering taking part in our study.

Total shoulder arthroplasty is an effective procedure that improves function and relieves shoulder pain in cases of glenohumeral arthritis. A significant challenge of this procedure is implanting the glenoid component (the cup side of the shoulder) in the best way possible to restore normal anatomy. Inaccurate implantation of the glenoid may lead complications like poor function, shoulder instability, and early wearing out of the shoulder replacement.

The primary objective of this study is to evaluate the accuracy of glenoid component positioning using standard care (standard operative guides and pre-operative planning with computed tomography (CT) scans) versus guides made specific to your shoulder anatomy and generated by the Blueprint software. Blueprint software is provided by the Wright Medical company and is already part of the planning process for shoulder replacements in 13 centers in Quebec.

You are eligible to be part of the study if you are a patient with shoulder osteoarthritis and/or avascular necrosis. Patients with the following will be excluded:

- Patients with previous shoulder arthroplasty
- Patients with tumor
- Patients with previous surgery with metal implant
- Patients unable to complete a 2-year follow-up
- Patients that do not speak English or French
- Patients with current or previous shoulder infection
- Patients requiring a bone graft during surgery

Should you choose to participate you will have a consultation with one of the physicians and a research assistant will explain the study and procedures in further detail. If you are interested in participating or would like further information, please contact [sandhya.baskaran.comtl@ssss.gouv.qc.ca](mailto:sandhya.baskaran.comtl@ssss.gouv.qc.ca).

Thanks again for your consideration.