

We will collect the following potential risk factors from the electronic medical records. The variables are mostly binary to make them compatible for all machine learning algorithms. Cut-off values will be used for the non-binary values. In case of doubt, overlap or less specific grouping than in this database, variables will be rounded up.

#### Patient characteristics

- Identification number
- Date of birth
- Sex
- Dominant side (yes/no)
- Chronicity of tear (<6 weeks / >6weeks)
  - Time from trauma to 1<sup>st</sup> treatment day
- ASA classification (1-4)
- Sport/activity level
- Receiving workers compensation (yes/no)

#### Biological factors

- Obesity (BMI <30 / ≥30)
- Cardiovascular disease incl. hypertension (yes / no)
- Smoking history (current smoker / non-smoker)
- Diabetes (yes/no; insulin dependent yes/no)
- Osteoporosis (yes/no)
- Hyperlipidemia (yes/no)
- Hypercholesterolemia (yes/no)
- Vitamin D deficiency (yes/no)
- NSAID use (yes/no)
- Thyroid dysfunction (no disease / hypothyroid / hyperthyroid)

#### Pathology characteristics (graded by by MRI or arthro CT)

- Tear location (posterolateral / anterosuperior)
- Size of tear (small (<1 cm), medium (1–3 cm), large (3–5 cm), or massive (>5 cm))
  - Size in the sagittal oblique plane
- Fatty infiltration (Goutallier 0 - 4)
- Muscle atrophy as graded by tangent sign (yes / no)
- Tendon retraction (Patte 1 - 3)

#### Surgical Technique

- Single row (yes / no)
- Double row (yes / no)
- Suture bridge (yes no)
- Performing surgeon (surgeon / resident / fellow)

#### Rehabilitation protocol

- Timing of active mobilization (<6wks ≥ 6wks)

#### Add-on Intervention

- Biceps tenotomy/tenodesis (yes / no)
- Bone marrow stimulation by microfracturing footprint (yes/no)
- Steroid injections within year prior to surgery (0 / 1 /  $\geq 2$  injections)
- Augmentation with subacromial inflatable device (yes/no)
- Augmentation/bridging with patches/scaffolds/extracellular matrices (yes/no)
- Local injectable biologics (yes/no) including:
  - Platelet-rich plasma (P-PRP, L-PRP)
  - Leukocyte and platelet-rich fibrin (L-PRF)
  - Growth factors
  - Cell therapy (bone marrow stem cells / BMAC MSCs)
- Systemic drugs - Statins (yes/no)
- Systemic drugs - Vitamin D supplementation (yes/no)
- Systemic drugs - Vitamin C supplementation (yes/no)
- Systemic drugs – NSAIDs from  $>6$  weeks postop (yes/no)

### Outcomes

- Retear at minimum 6 months (yes no)
- Type of retear (Sugaya 1-5)
- Adverse event
  - None/mild (none reported) / Moderate/severe (reported adverse event)
  - Type of adverse event (Infection/revision/stiffness/other)
- PROMS
  - Type of PROM
  - Time of measurement (in days from surgery)
  - Consistency of PROM (yes/no)
    - *Will be seperately formulated per PROM based on MCID improvement/consistency*
    - *As the calculation of this variable will be greatly dependent on which PROMS and follow-up duration will be submitted by co-authors, we prefer to receive 'raw' data.*