The goal of developing a total hip replacement (THR) score system is to standardize the pre-operative evaluation of the THR candidate and guide the surgeon in decision-making. The less experienced surgeon can utilize the score to select less difficult cases at the initial learning curve. The score is based on signalment, history, physical exam and preoperative radiographs and is designed to guide the surgeon in THR decision-making. This system is primarily intended to score the technical difficulty of the case and potentially to predict complications.

Simple questions that the score should answer are:
1. Is the stem preparation going to be difficult?
2. Is this case appropriate for a more advanced THR surgeon?
3. Could the technical difficulty of this case predispose to postop complications?

To develop the score a group of surgeons including Biomedtrix instructors and Kyon instructors have defined the categories that should be scored in each patient. Each category has subjects that are scored. The framework for assessment of technical degree of difficulty is built on categories that should be scored by the surgeon. Note that certain criteria that imply a low degree of technical difficulty can contribute to a worse prognosis. A score value calculated by summing all the weighted scores will define the technical difficulty of the case. The numerical value will also provide an indication for selection of BFX or CFX. It will also suggest the difficulty (and potential likelihood of complications).

The following list includes the categories and the variables that should be scored.
1. Acetabular exposure
   Muscle bulk
   Body condition score
   Dorsal luxation
   Periarticular fibrosis (acetabular / femoral malunion)
   Periarticular osteophyte (extension beyond equator contributing to hip lock)

2. Femoral presentation
   Muscle bulk
   Body condition score
   Dorsal luxation
   Size of dog
   Femoral conformation (procurvatum implies a lower stifle setting to render the proximal femur parallel to the floor)
   Periarticular fibrosis

3. Acetabular preparation
   Immature dog with disarticulated hip (poor bone quality: medial cortical perforation risk)
Acetabular sclerosis (severe OA: implications for interdigitation of cemented fixation and ease of incremental preparation).
Dorsal migration of the acetabular articular surface and acetabular bony infilling (definition of reaming axis)
Pseudoacetabulum (associated with chronic luxation)
Dorsal rim erosion
Size of acetabulum (e.g. small dog where 22mm BFx cup prep is desirable but mandates cranial translation of reamed axis).
Poor acetabular trabecular bone quality (young GSD) (compromised press fit)
Acetabular malunion.
Previous JPS / TPO / transitional asymmetrical vertebral attachment

4. Femoral preparation
Subtrochanteric sclerosis (luxation, old FCP fracture, old neck fracture)
Femoral neck resorption (old FCP fracture, biplanar cut?)
Lateral drift of the proximal medial femoral cortex (luxation, FHO)
Osteopenia / decreased cortical mass
Femoral medullary bone quality (GSD)
Cylindrical femur
Fit and fill issues identified on templating, e.g. endosteal pressurization by BFx stem tip contact, narrow isthmus
Non-linear proximal femur e.g. procurvatum, malunion
Previous FHO

5. Reduction
   Challenges include fracture risk and requirement for myotomy e.g. pectineus
b. Size of dog
c. Femoral displacement mismatch e.g. old GSDs have a large diameter femur, but generally a relatively short neck length, causing external rotation without downsizing of the femoral stem. Also consider obturator tenotomy.
d. Identify risk of patellar luxation, especially exacerbation of MPL I.
e. Periarticular fibrosis / chronicity

6. Closure
Joint capsule redundancy with chronic severe subluxation (assess requirement for radial capsulectomy)
Joint capsule mineralization
Joint capsule / deep gluteal attrition (traumatic luxation)