Trauma Division
Orthopaedic Research Retreat

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Clinical trials

• **Major Extremity Trauma**

• **Research Consortium**

• *Improving outcomes through collaborative research*
METRC Studies

- BIOBURDEN - assessing bacterial load in open tibia fractures - *Currently Enrolling*
- OUTLET - Outcome after severe distal tibia/hindfoot fractures - *Currently Enrolling*
- POvIV - Randomized study comparing PO vs IV abx in acute infections after orif - *Currently Enrolling* (Identify Patients if seen in clinic)
- OXYGEN - effect of high vs low O2 conc periop for orif fx - (Awaiting IRB approval)
METRC Studies

• TAOS- Comparing BKA techniques- Burgess vs Ertl (In preparation for IRB approval)

• STREAM- PROMIS based IPAD study to evaluate for depression in OUTLET patients
We Need your Help

- Identify patients
  - Especially in hand clinic/foot and ankle clinic
- Encourage participation

- Vasantha Reddi - research coordinator
- Veronica Lester-Ballard - clinical research coord
Selected Other Trauma Division Clinical Trials

- Local antibiotics to prevent wound infection
  - IRB Review
- Administration of abx in the field for open fx s
  - Drafting protocols
- Tibia Fracture database
Successful Collaboration
Volumetric Muscle Loss

• The Problem
  – Severe musculoskeletal injuries often associated with loss of muscle
  – Surrounding muscle can hypertrophy but does not fully compensate
  – If complete loss of muscle unit- limited options to recover function
• Is there a way to replace lost muscle with scaffold to allow regeneration of new/functional muscle?

• **KeraNetics** is an advanced biomaterials company focused on creating keratin-based products for therapeutic and regenerative medical applications. (from their website)

• - Developed Keratin Gel scaffold which can serve as void filler and potentially as carrier for molecules to assist with muscle growth
• Basic Science work ongoing
• Animal study planned
• Needed clinical trial plan to assess safety
• Short time frame due to grant deadlines
• Limited clinical data
• Big issue in Wounded Warriors
• Utilized data from UVA studies on muscle to form materials/methods
• Plan for 5 patient trial
• 25-30 cc VML in anterior tibialis after injury
• Collaboration with BME dept
  – research MRI
  – Zebrascope (evaluate muscle fibrils)
  – Functional testing