



# 25 Pearls & Pitfalls:

## 25 yrs of Arthroscopic Surgery

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Special focus:  
knee

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# Disclosures

- ⦿ **No personal corporate disclosures**
- ⦿ **UIC Dept of Orthopaedics receives academic grant support from a number of corporate sponsors for resident education**
- ⦿ **Editorial Boards: JBJS (past), AJSM, BJSM, MSSE, Physician & Sportsmedicine**
- ⦿ **Full disclosure on AAOS website**



# Be open minded

- Visit a buddy's Operating room to take home a pearl or two





**OPEN**  
**24 Hours**

# An ounce of prevention...

🎯 **Uninjured joints/knees have better outcomes than any surgical reconstruction**

- 🎯 ACLprevent.com
- 🎯 Include single leg squats on unstable surface in your PPE
- 🎯 Pitch counts for throwers







# Proper Preop Planning Prevents Pitiful Poor Post-op Performance

## ❶ Complete H&P every time

- ❷ Prior surgeries
- ❷ Hemophilia
- ❷ Blood clots
  - ❷ females on OCPs
- ❷ Is it Pain or Instability





# 8 P's + H & P

## 🎬 Complete PE every time

- 🎬 Back & hip for referred pain to LE (neck...UE)
- 🎬 Standing alignment
- 🎬 Need full knee extension before surgery
- 🎬 Look for associate injuries (MCL, PCL, PLRI)
  - 🎬 “Don't be cocky, be complete” MLI
- 🎬 Relaxed exam: Don't let the resident or ER doc try the Pivot shift before you

# CATCH-22

## 8 Ps + Imaging

- ⊗ Review your imaging studies **BEYOND** the obvious
  - ⊗ **Avulsions**
  - ⊗ Patella alta
  - ⊗ Patellar tendinosis
  - ⊗ Small patellar tendon width
  - ⊗ Osteochondral lesions
  - ⊗ Repairable menisci
    - ⊗ Decrease prognosis
    - ⊗ Patients don't like surprises of 6 weeks of crutches





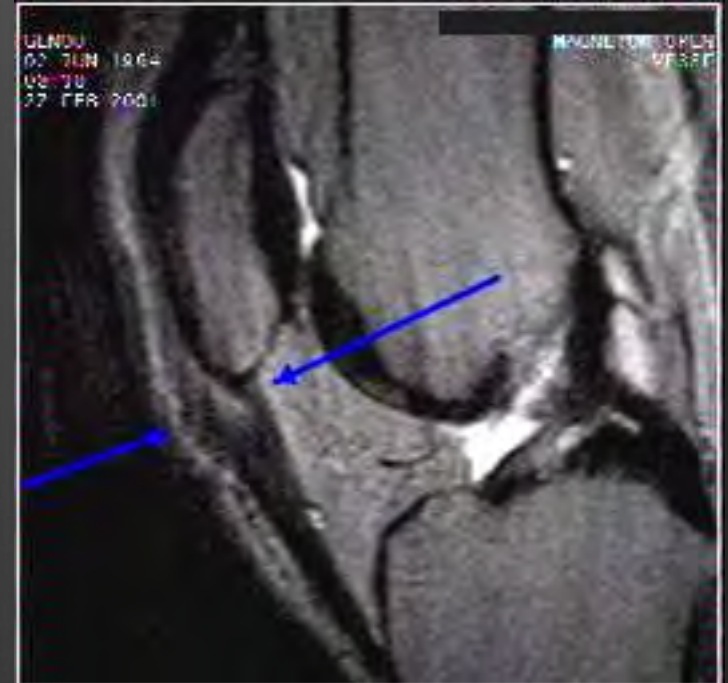
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The 9th P

# Patient Selection

- **Pick your patients carefully**
  - Will they do the rehab?
  - Skeletally immature
  - What is their real demand?  
(elite vs. recreational)
  - Copers vs non-copers
  - **Freedom challenged**
  - Financially challenged
    - Indicated vs entitled





# Informed Consent

- ⦿ Does your patient **really** understand risks, benefits, extent of rehab, likely outcome?
- ⦿ Share your perceived outcomes AND the best evidence available
- ⦿ The “**Unbiased**” Graft choice discussion
- ⦿ Be open about any and all conflicts of interest
- ⦿ Are you running simultaneous ORs?



# More Prevention

- 🎬 Sign your site
- 🎬 Wrap the opposite leg
- 🎬 Talk to your patient
- 🎬 Time out





# EUA: everytime

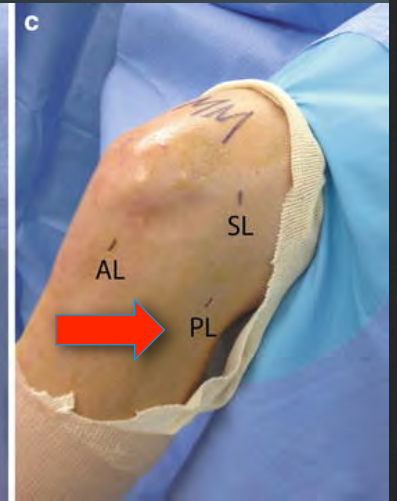
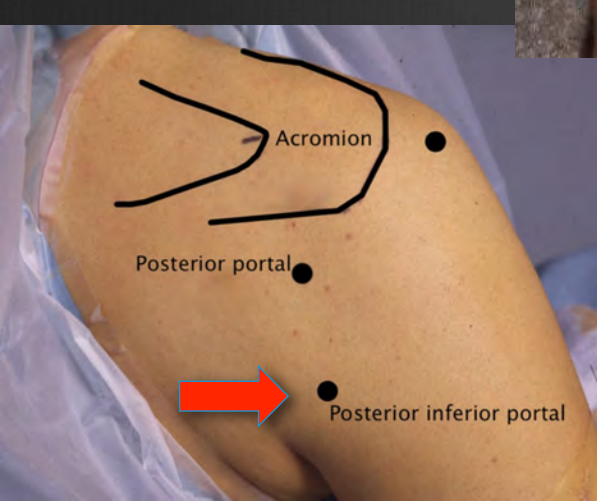
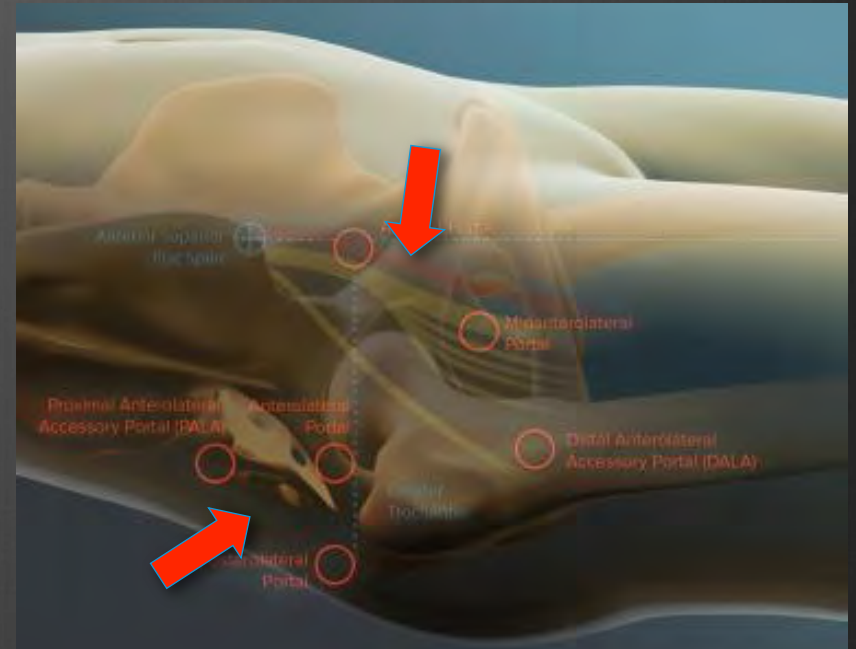
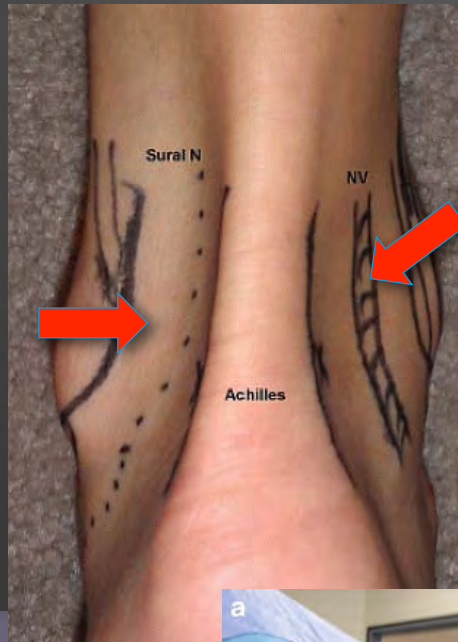


- ⊙ Examine every patient under anesthesia
- ⊙ Partials may not need to be reconstructed in low demand
- ⊙ Great time to pick up associated injury & primary direction
- ⊙ Great exam practice for residents!
- ⊙ Always compare to opposite side!





# Safe portals!!!



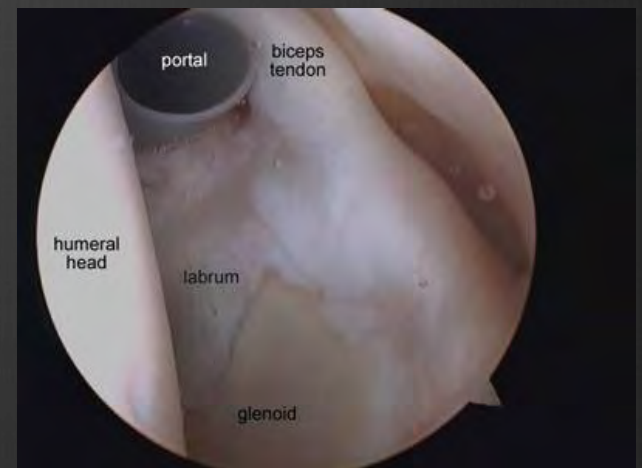
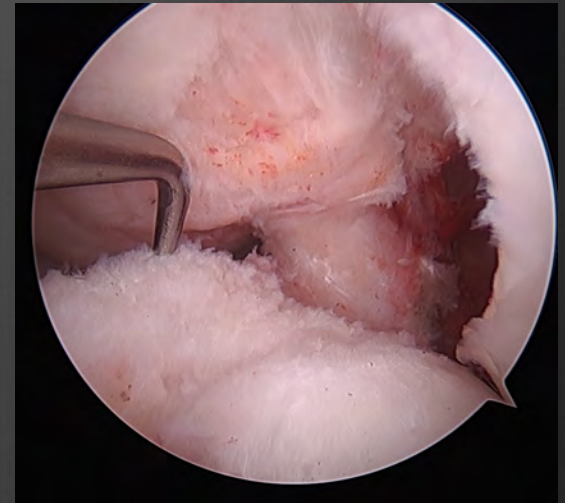


# Sweet 16

## Sequential Dx Scope: ...same way everytime

🎬 **Knee:** PF joint, Lateral gutter, medial gutter, medial compartment, notch, cruciates, lateral compartment, posterior compartments

🎬 **Shoulder:** Subacromial space, Glenohumeral space,, biceps, anterior labrum, inferior recess, capsule, posterior labrum, cuff



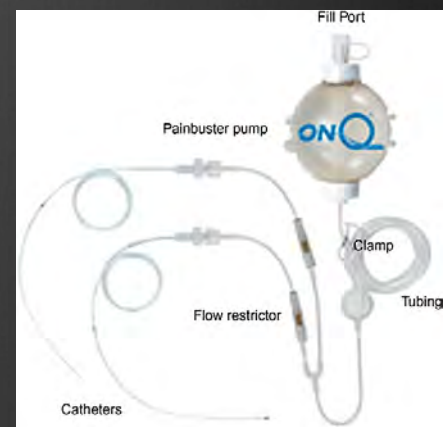




F-15

# Don't invent things on the fly

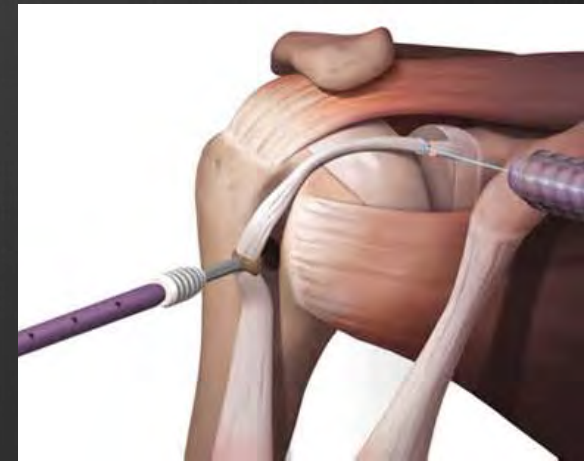
- ❉ Super glue on tendons
- ❉ Intra-articular pain pumps
- ❉ Non-approved or validated use of implants and equipment





# Reproduce Anatomy

- ⦿ Non-anatomic options tend to fail:
  - ⦿ Isolated extra-articular reconstructions
  - ⦿ Clancy Biceps tenodesis for PLRI
  - ⦿ Repair of sub-labral holes (ant-sup labrum)
  - ⦿ Putti-Platt shoulder
  - ⦿ ? Biceps tenodesis shoulder?
  - ⦿ ? Remplissage?
  - ⦿ ? Vertical ACL tunnels





# Outcomes never lie: Adjust as needed!

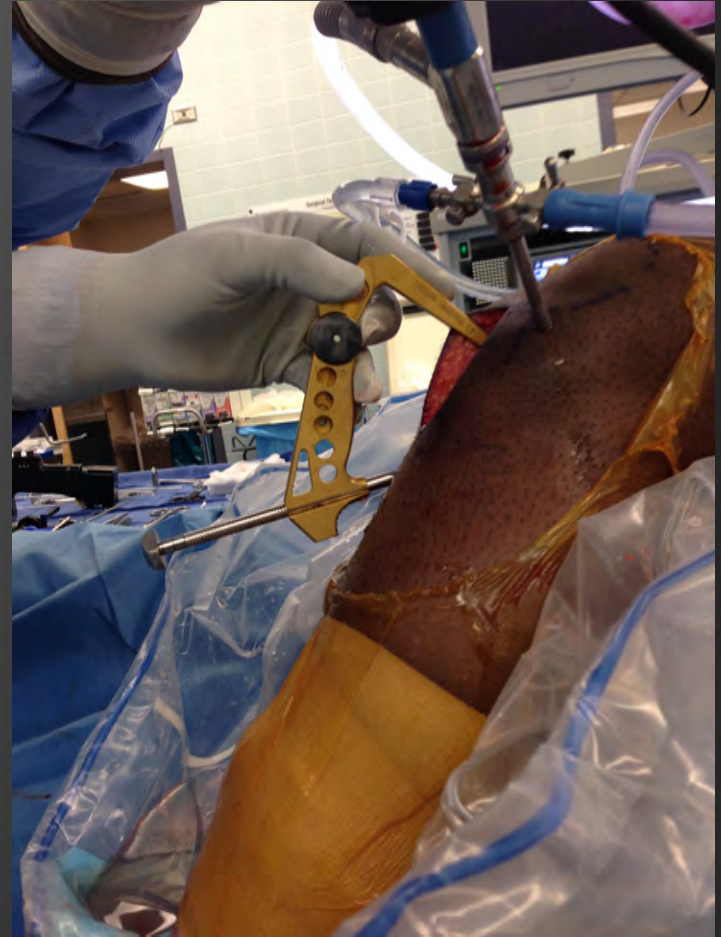
❁ Consider a more vertical tibial tunnel!

❁ Avoids graft tunnel length mismatch

❁ Intra-articular aperture is round not oval

❁ Smaller intra-articular footprint reduces risk of injury to meniscus root

❁ Watson, Hutchinson, LaPrade, LaPrade, ESSKA, 2013





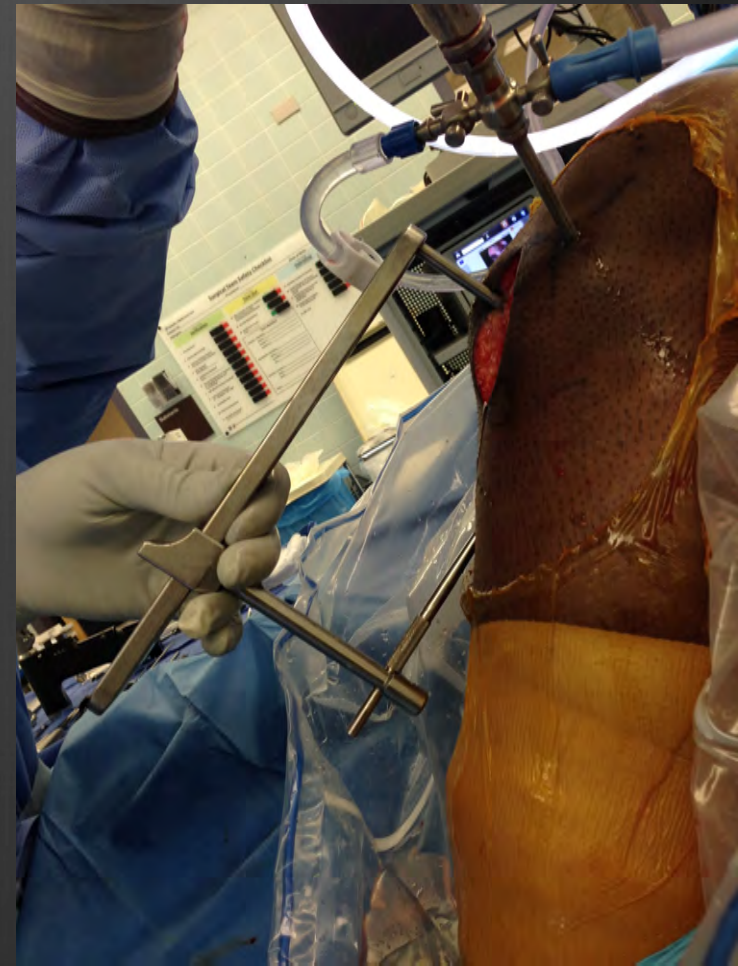


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# Outcomes never lie!

## Adjust as needed!

- ⦿ Advantages of vertical tibial tunnel but....
  - ⦿ “Kaitlan” post





# Less may be more

- ⦿ Not all degenerative menisci need to be removed
- ⦿ Partial PLRI don't need to be reconstructed
- ⦿ Microfracture can lead to subchondral sclerosis
- ⦿ Too aggressive capsulorrhaphy leads to stiff shoulder

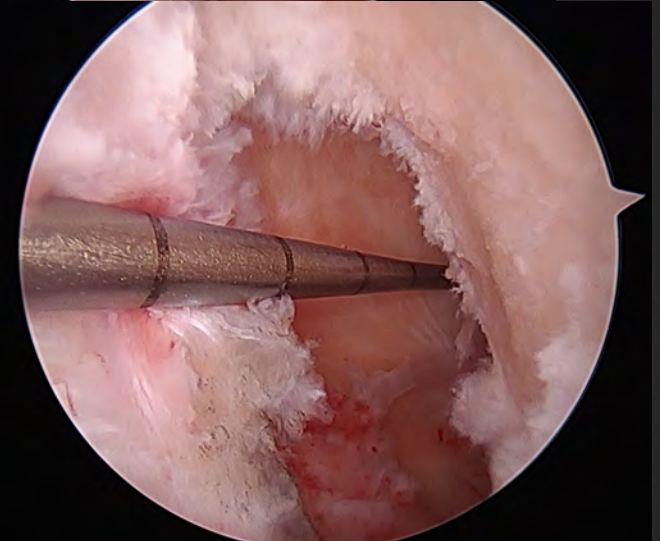
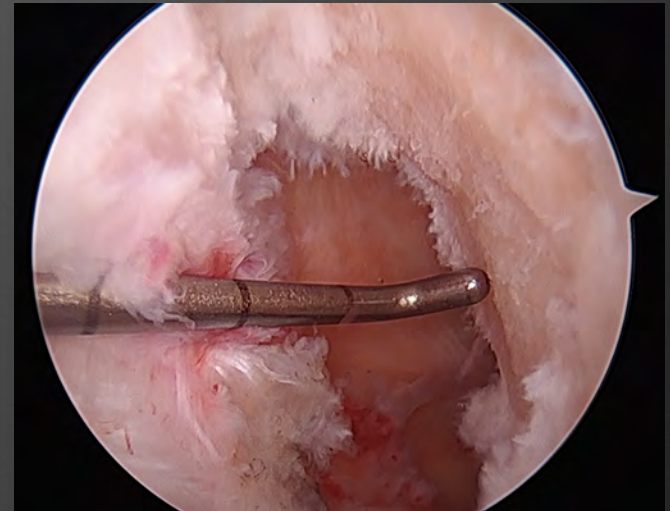






# Optimize visualization: You must see to succeed

- 🎬 **Must SEE landmarks**
  - 🎬 Beware Clancy's "Resident's ridge"
  - 🎬 Root and Ramp lesions
  - 🎬 Beware veil of tears in subacromial space
  - 🎬 Tighter space in hips
  - 🎬 70 degree scopes

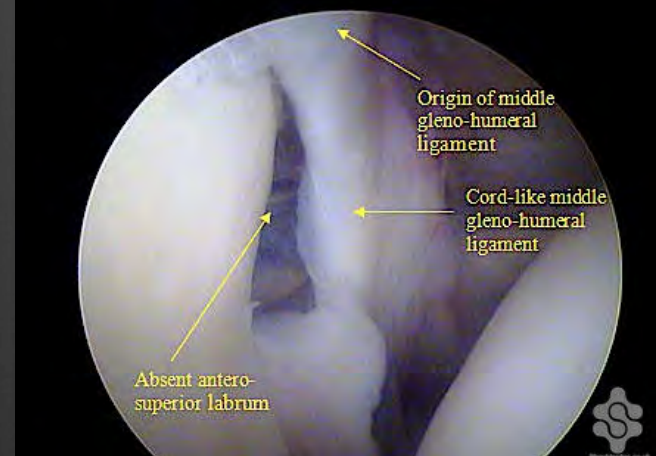






# Recognize normal variants

- ⊗ Inter-meniscal ligament
- ⊗ Ligament of Humphrey
- ⊗ Discoid meniscus
- ⊗ Sublabral holes in GH jt
- ⊗ Buford Complex



# Always have a salvage!

“Dr. Hutch, the plug came off the graft what should I do?”

- ⊗ Retro-reamers, **Two incisions**
- ⊗ Back-up hamstring graft
- ⊗ Fixation failure
- ⊗ Ext-endo-button







# Patient's judge you by your scars

## ⊗ Patient's like small pain free scars

- ⊗ Initial incision with knee in flexion will minimize scar in extension
- ⊗ Distal pole to medial tibial tubercle so they don't kneel on the scar



**But don't let the skin stand between you and doing what you need to do!**





# Be Open to Change

- Tool of the devil
- Better materials/  
implants/anchors
- Better techniques
- Stay current with  
the literature



# Avoid Bandwagons



Thermal capsulorrhaphy was an avoidable mistake!





High five!

# Remember: your corporate rep is biased

and cancellous bone

- A stepped taper design of the screw maximizes insertion torque as the screw is fully seated
- Material strength allows for implantation without tapping in most circumstances

## BioComposite Screw Instrumentation

### Drivers

The BioComposite Interference Screw Drivers are an industry-first for efficiency and strength. The hexalobe design of the driver tip interfaces completely with the BioComposite Interference Screw efficiently distributing torque, eliminating torque strip. The driver fully supports the entire length of the screw, eliminating screw breaking if divergent screw insertion is encountered. The driver tips are laser marked to signify when each screw is fully seated on the driver, and the shafts are laser marked in 5 mm increments to facilitate tunnel sizing and verification of screw insertion depth. The drivers are available in a solid handle version and a quick connect version to use with a ratcheting handle. These cannulated drivers allow for insertion into the joint over a flexible guide wire.



Hexalobe Driver Interface of the BioComposite Screw



Cross-section of BioComposite Screw



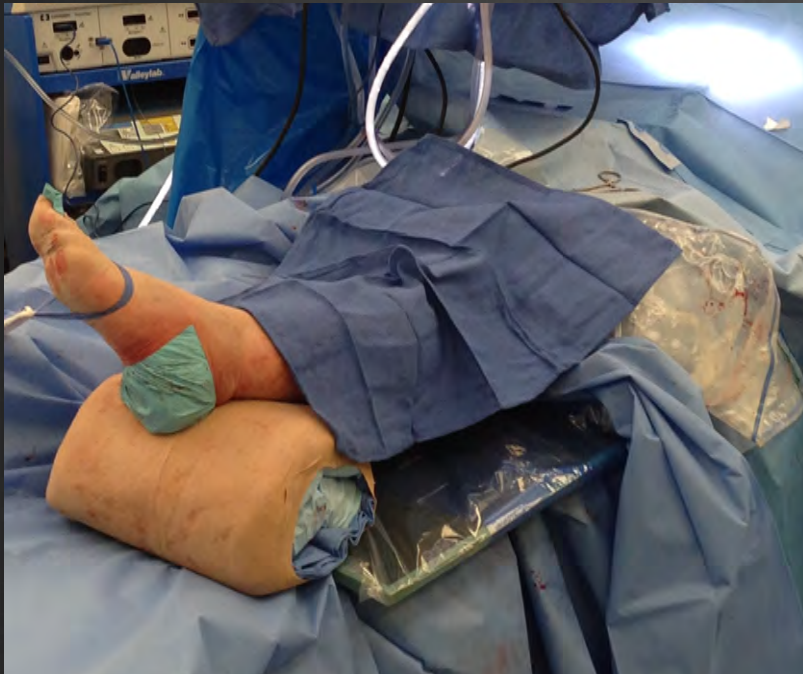




4 Horseman

# Intra-Op Imaging

- 🎞 All implant cases
- 🎞 Marty test







# Intra-Op Imaging



🎬 All cases

🎬 Marty test



## TRIPLE CROWN

1919 SIR BARTON

1930 GALLANT FOX

1935 OMAHA

1937 WAR ADMIRAL

1941 WHIRLAWA

1943 COUNT FLEET

1946 ASSAULT

1948 CITATION

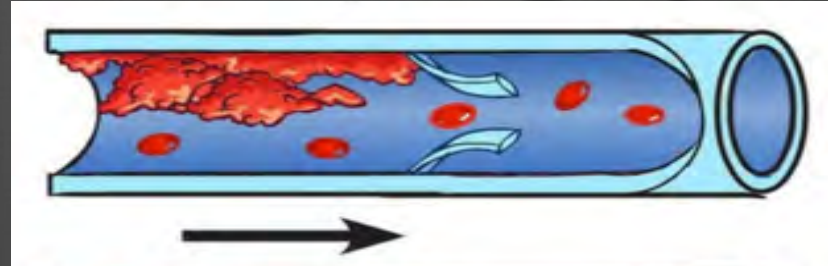
1973 SECRETARIAT

1977 SEATTLE SLEW

1978 AFFIRMED

## WINNERS

# DVT Prophylaxis



- ⦿ USA vs Europe
- ⦿ Coumadin?
- ⦿ Enoxiparin?
- ⦿ Aspirin?
- ⦿ Compression?



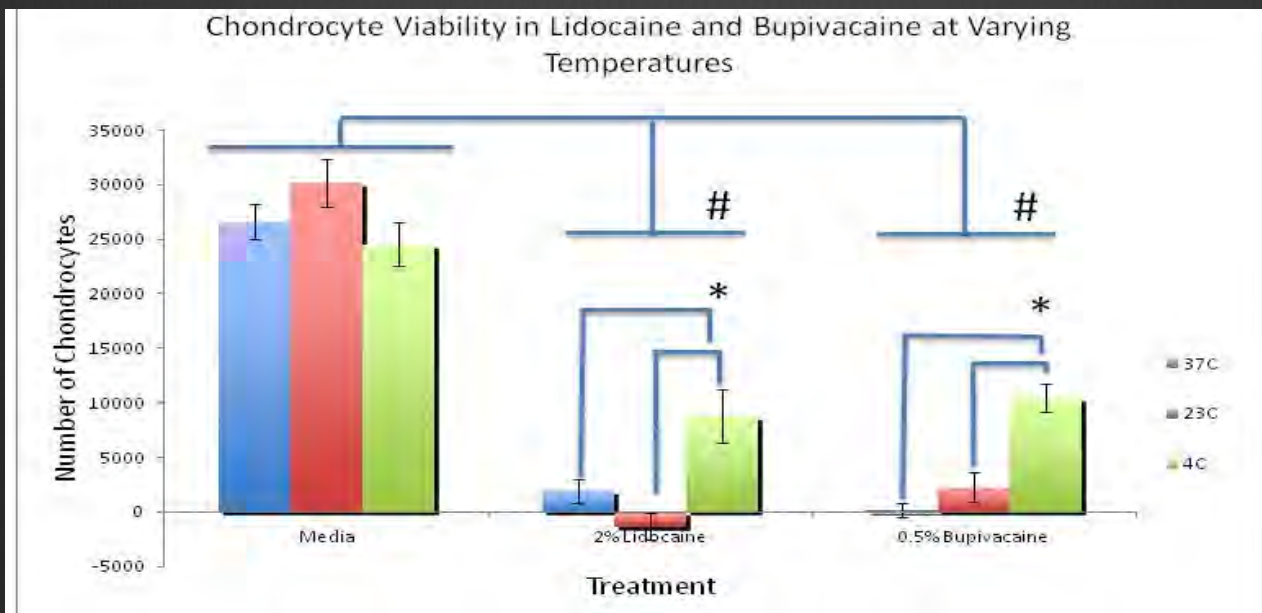
## Mechanical & Chemo Prophylaxis!





# Post-Op: Pain

- Regional nerve blocks?
  - May decrease quad function, inherent complication
- NO intra-articular Lidocaine/Marcaine!!!!!!!!!!**



# 50/50 rule

- ⦿ Surgical technique is important but optimal rehab accounts for at least 50% of successful outcome.



Learn from the past or  
be doomed to repeat it!



*Thank you*

