

Hands-On
Cadaver Seminar
February 21-23, 2024
Celebration, Florida

MIS INSTRUMENTATION

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Conflict of Interest Disclosure

Beth Pearce DPM

has no financial relationship with companies and/or products which could affect the objectivity of this lecture.

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NECESSITY: “The Mother of Invention”

MIS HISTORICAL DEVELOPMENT

- Soft Tissue Release
- Exostosis
- Combination of Exostosis & Soft Tissue Release
- Traditional Procedures Performed MIS
- Newly Developed MIS Procedures

EXPERIENCE

- ▶ REMEMBER
- ▶ “Experience” is what you get when you don’t get what you want.
- ▶ Paraphrase of Randy Pausch
“The Last Lecture”
- ▶ All Instrumentation must be available. Be prepared to open if needed.



INSTRUMENTATION

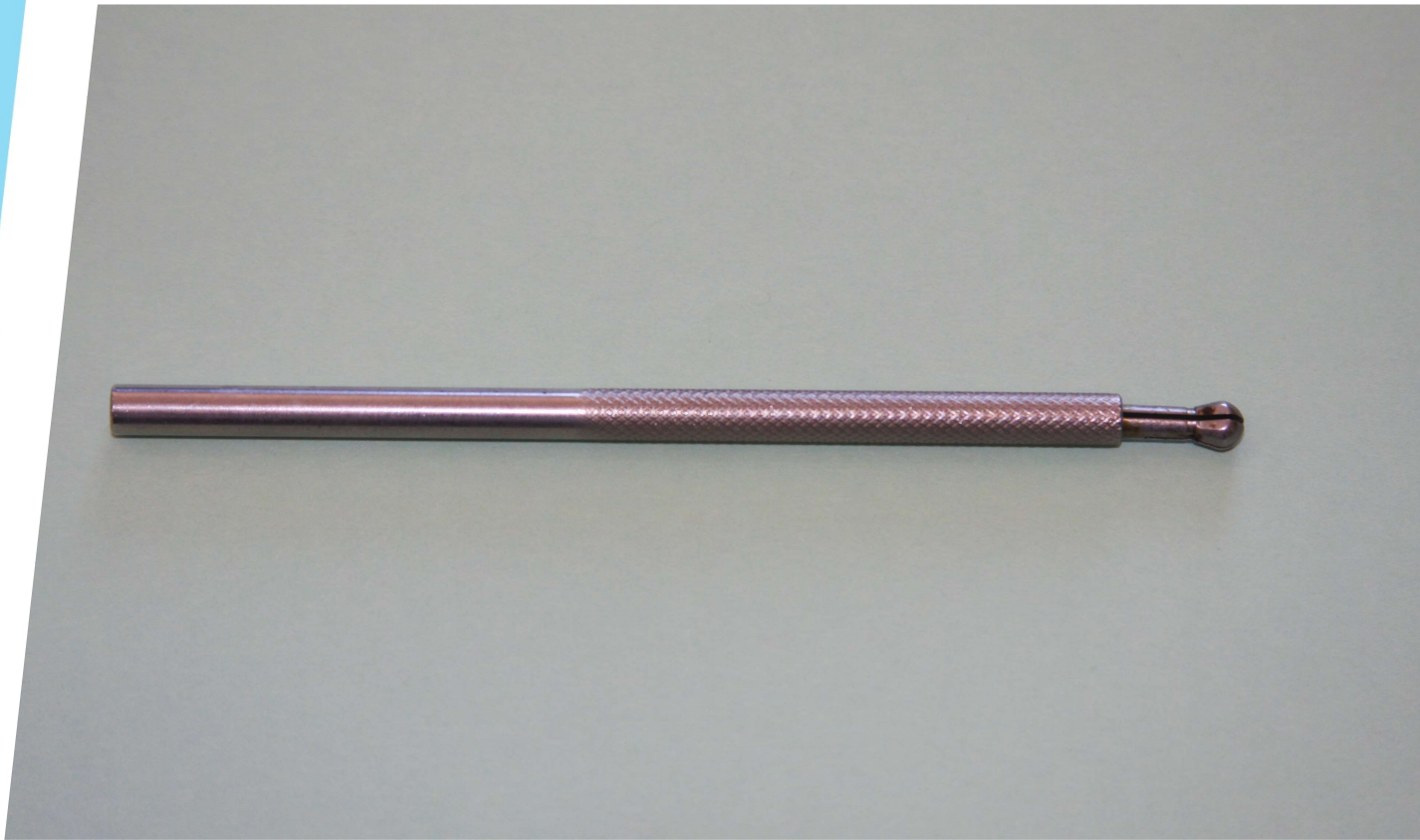
BE PREPARED FOR “EXPERIENCE”

K-wire and Magnet

INSTRUMENTATION

Basic Pack





INSTRUMENTATION

Blade Holder



INSTRUMENTATION

Standard Scalpel Blade Holder

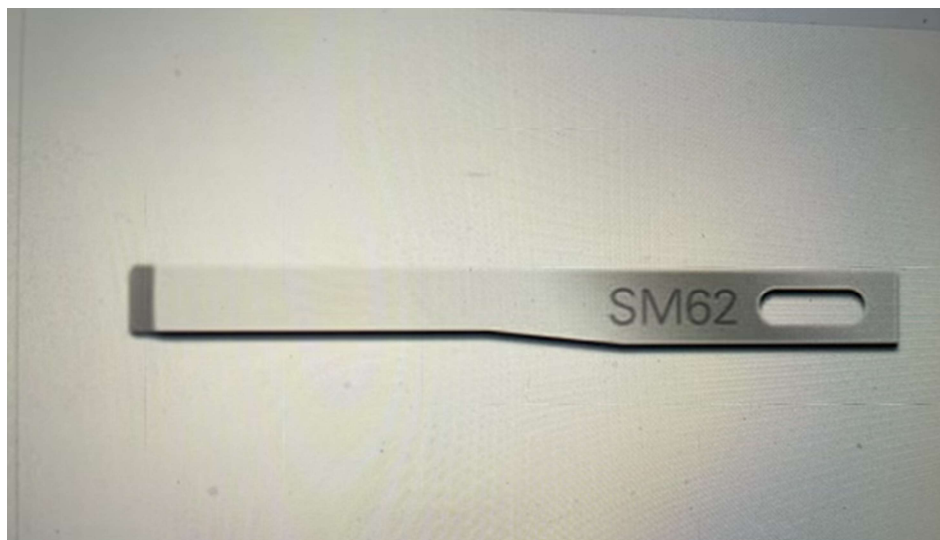
INSTRUMENTATION

61 Blade for tendon and small joint



INSTRUMENTATION

62 Blade for medium tendon and medium joints



INSTRUMENTATION

64 Blade for deep tendon such as lateral release and larger capsule/bunion intervention.



INSTRUMENTATION

**67 Blade for tendon and small/medium joints
smaller incision site portal creation**



INSTRUMENTATION



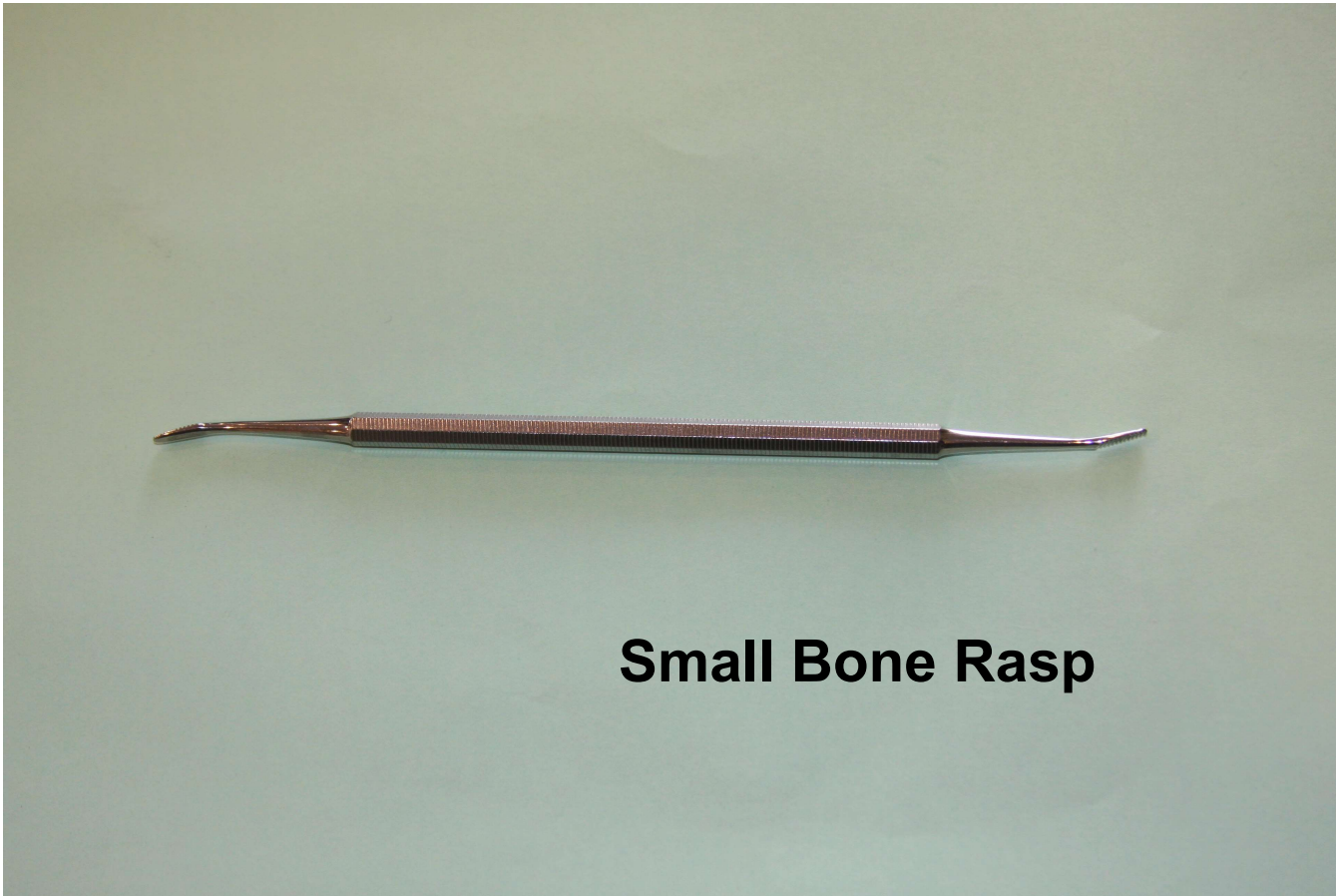
Large Bone Rasp

INSTRUMENTATION



Large Bone Rasp

INSTRUMENTATION



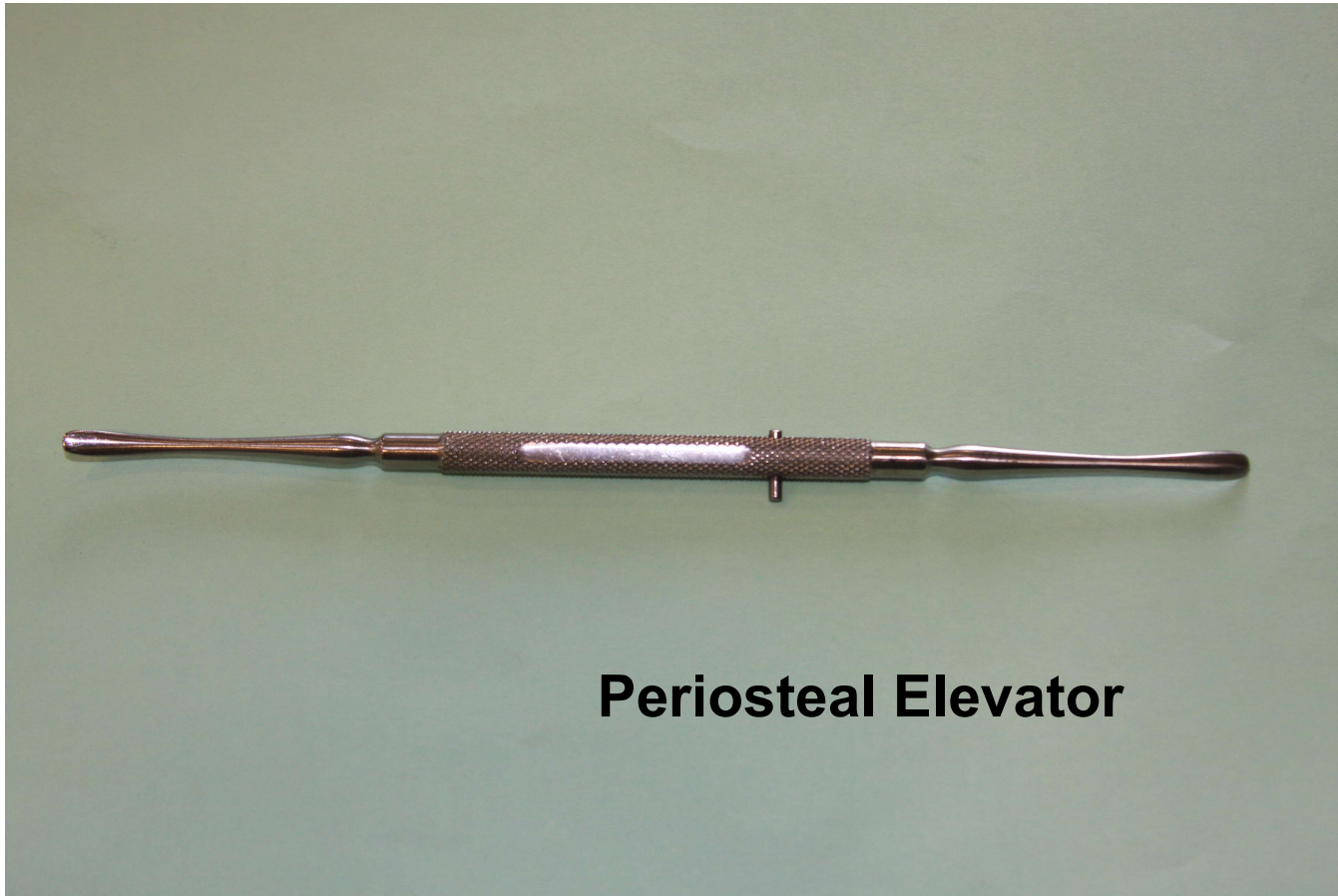
Small Bone Rasp

INSTRUMENTATION



Small Bone Rasp

INSTRUMENTATION



Periosteal Elevator

INSTRUMENTATION



Soft Tissue Scissors

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Needle Driver

INSTRUMENTATION



Suture Scissors

INSTRUMENTATION



Allis Forceps

INSTRUMENTATION



Allis Forceps

INSTRUMENTATION



INSTRUMENTATION



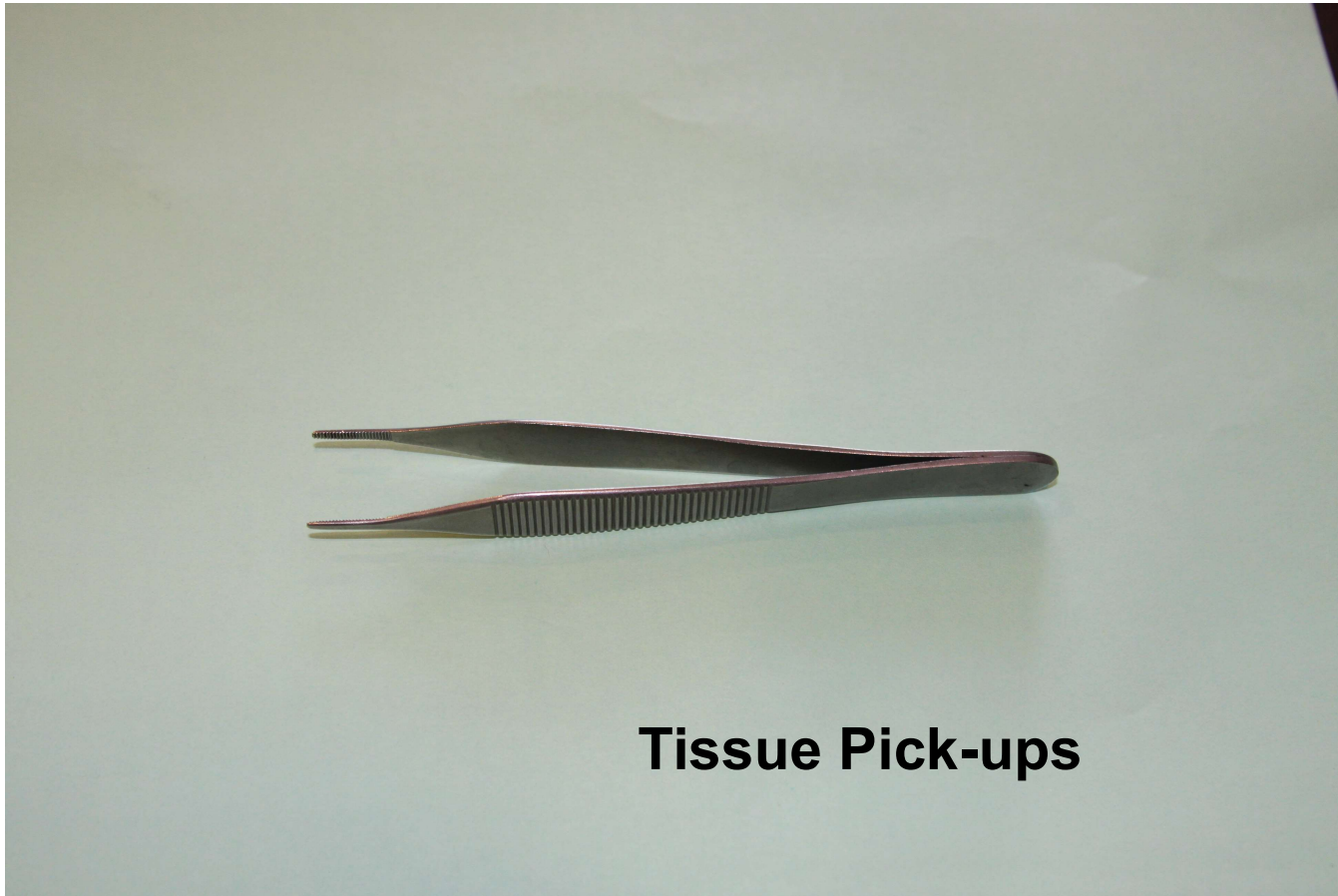
Curve Hemostats

INSTRUMENTATION



Straight Hemostat

INSTRUMENTATION

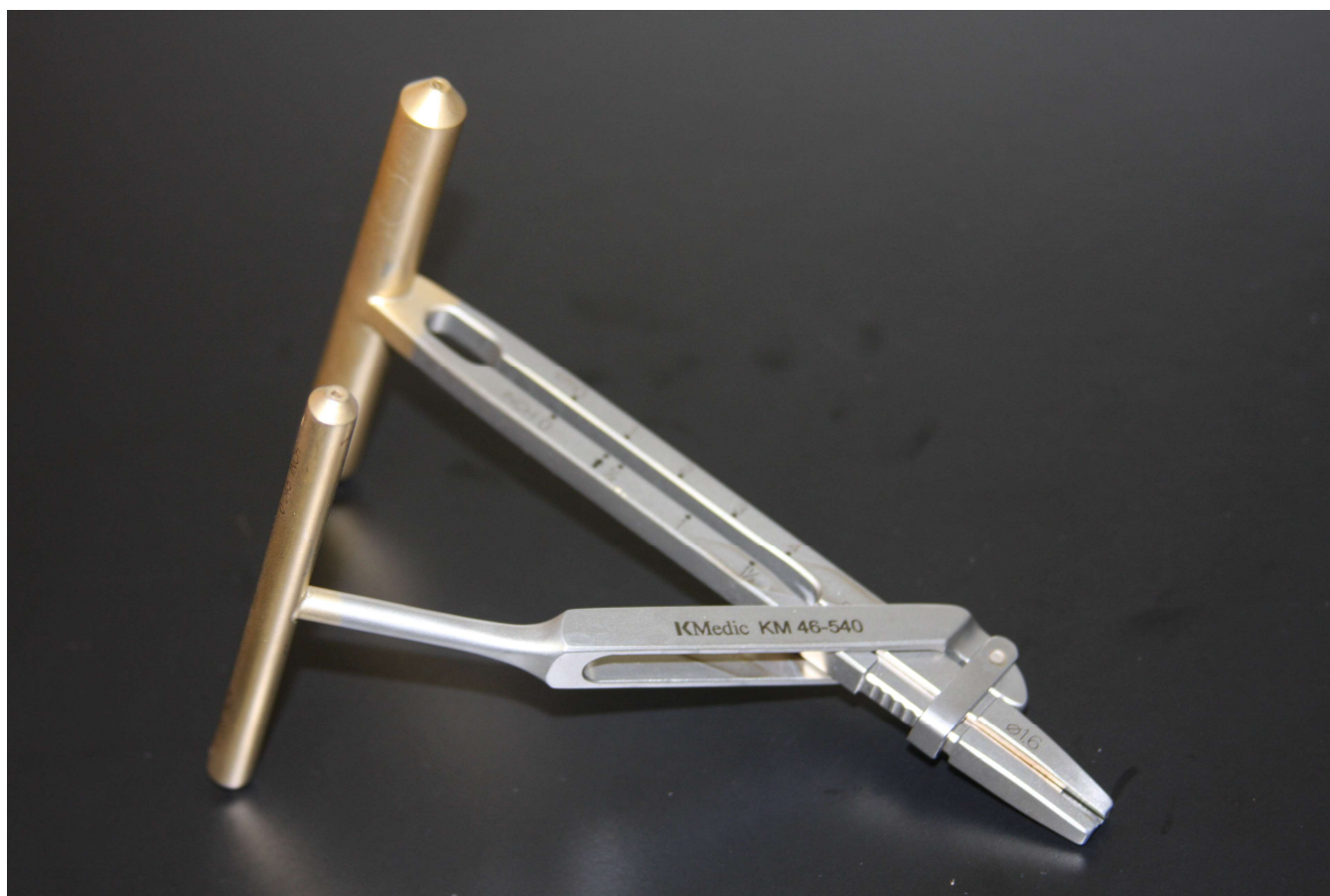


Tissue Pick-ups

INSTRUMENTATION

ADDITIONAL INSTRUMENTATION

INSTRUMENTATION

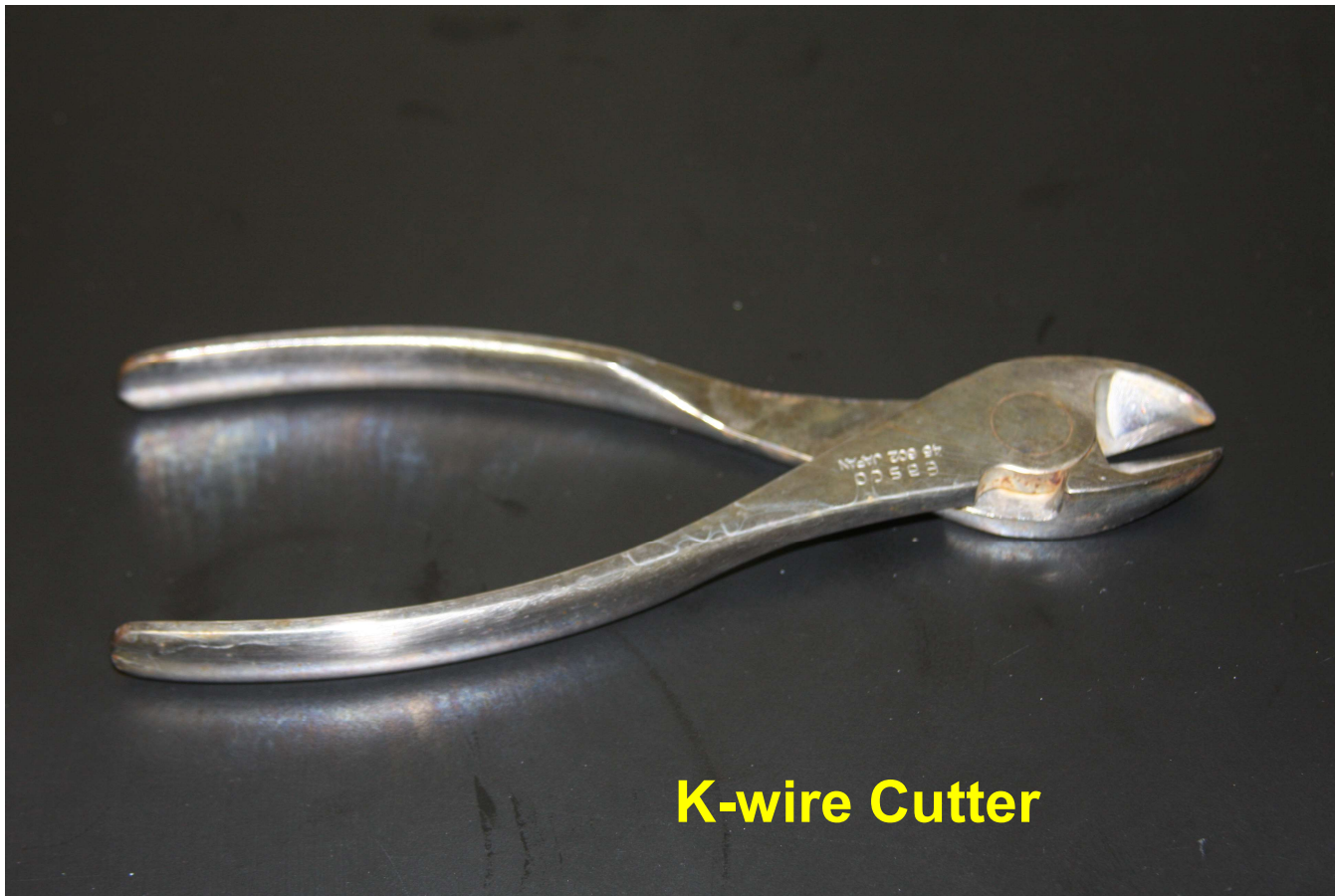


Manual K-wire Inserter

INSTRUMENTATION



INSTRUMENTATION



K-wire Cutter

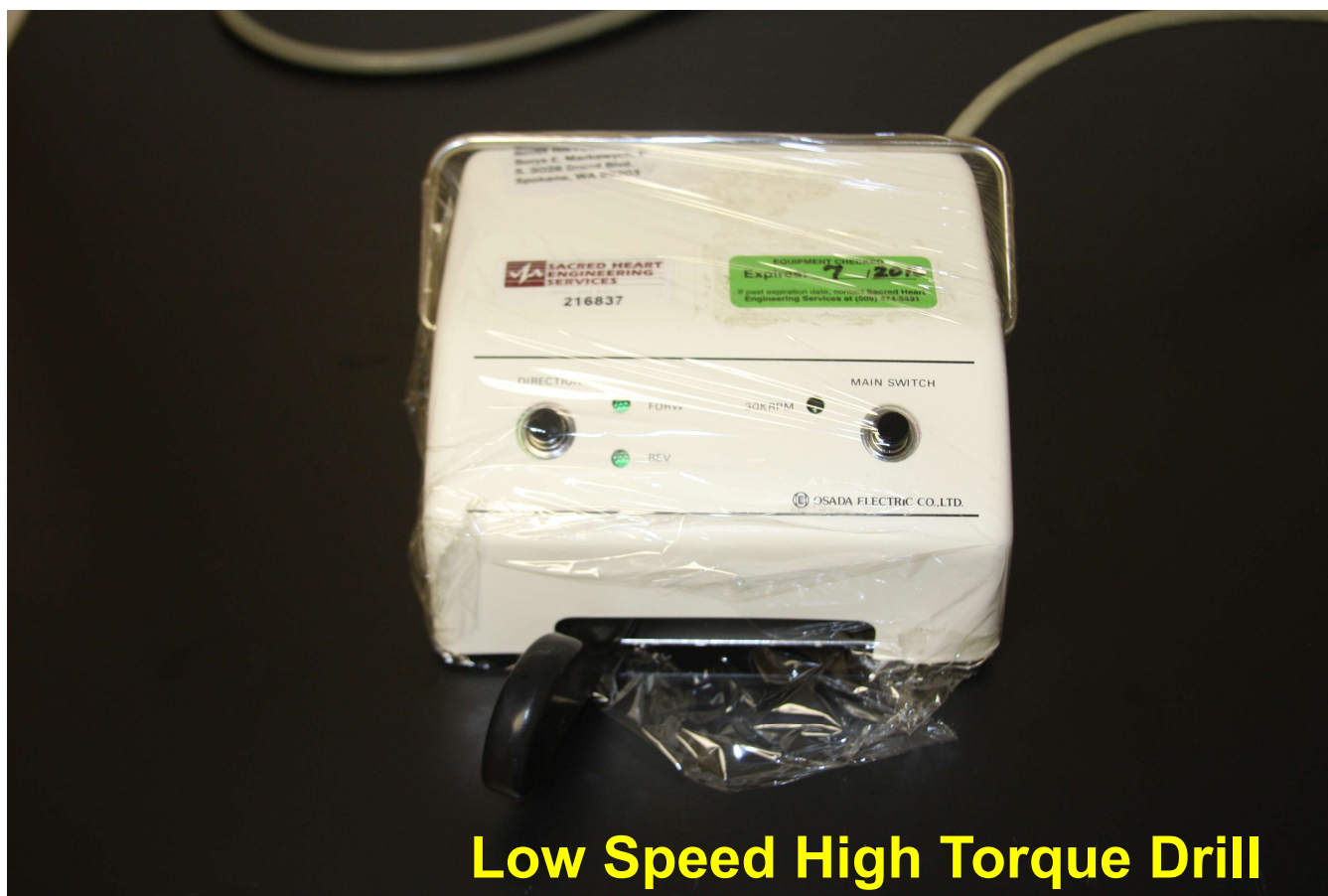
INSTRUMENTATION

Percutaneous Screw Set

INSTRUMENTATION

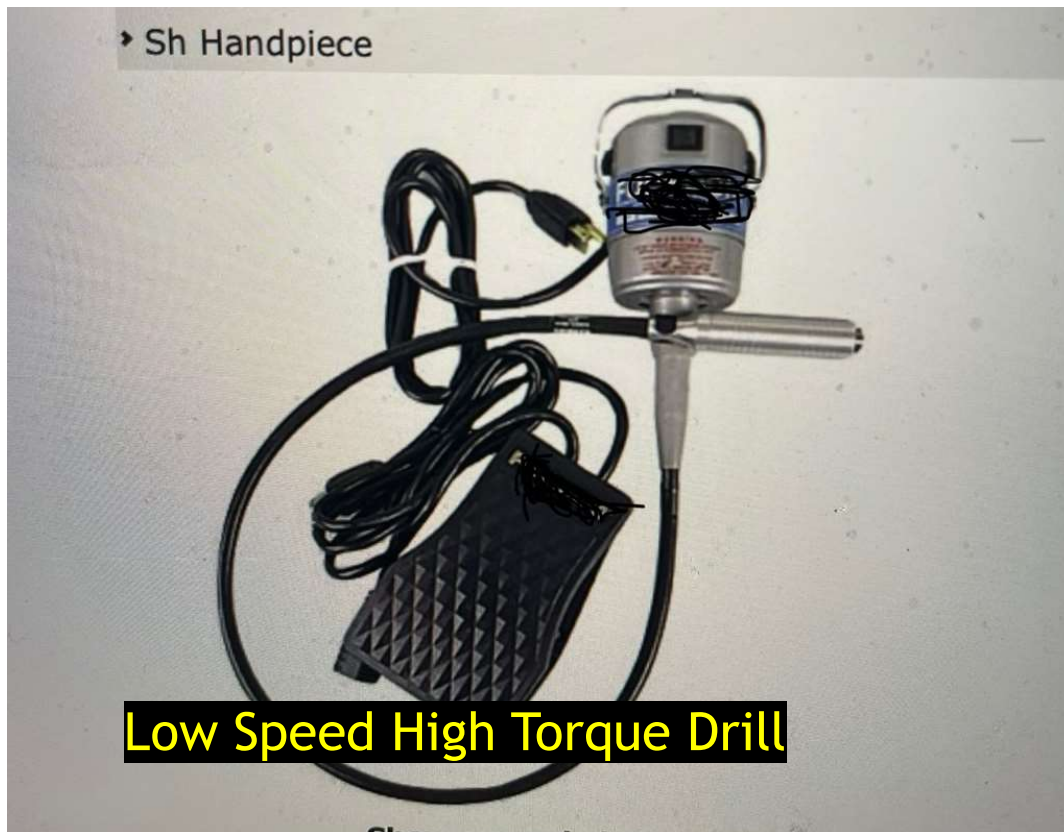
POWER INSTRUMENTATION
LOW SPEED
HIGH TORQUE

INSTRUMENTATION



Low Speed High Torque Drill

INSTRUMENTATION



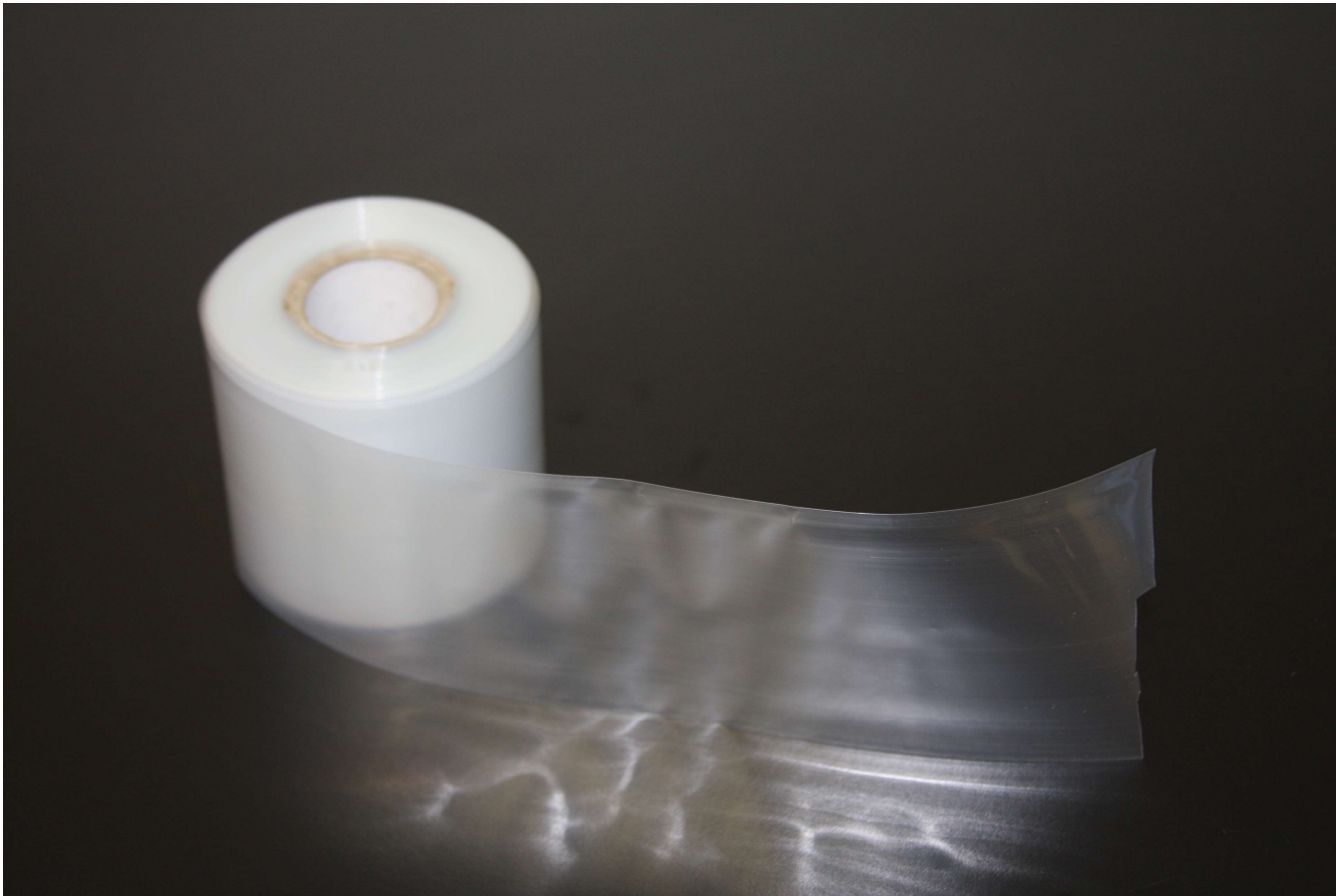
INSTRUMENTATION



Power Cord

INSTRUMENTATION

Sterilization Tubing



SET UP



Hand piece

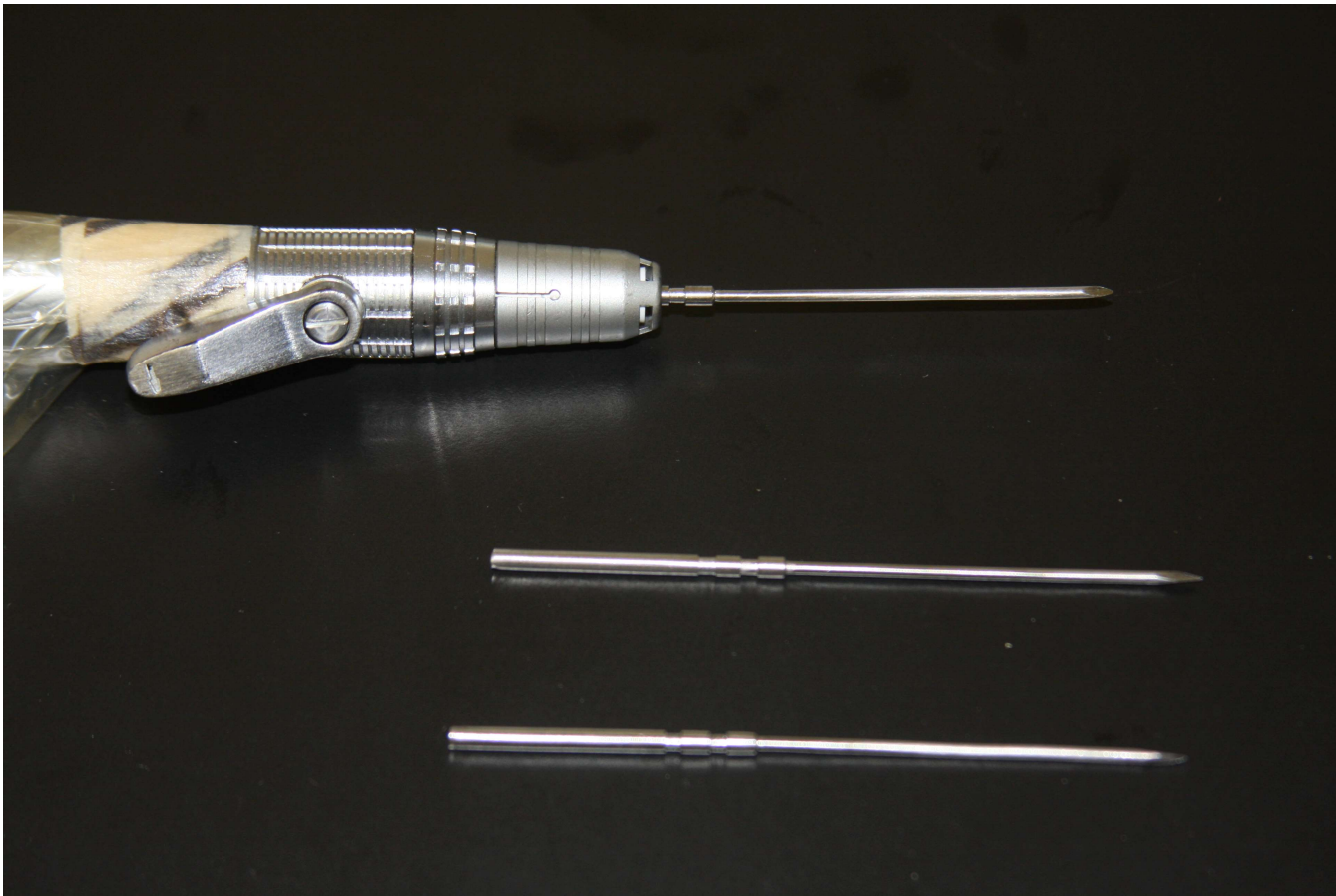
INSTRUMENTATION

Optional saw set up



INSTRUMENTATION

K-wire set up



INSTRUMENTATION BURS

Essential types:

- ▶ Bone cutting
- ▶ Bone Reducing
- ▶ Bone Remodeling

Designed for percutaneous foot surgery, MIS Burs are available in a variety of flutes and lengths for specific foot procedures. As a minimally invasive tool, the small size allows surgeons to access the surgical site using small openings.

INSTRUMENTATION

BUR DESIGN

- ▶ Special design for procedures to include:
- ▶ Osteotomies of the 1st metatarsal
- ▶ Distal vs Proximal
- ▶ Akin osteotomy
- ▶ Cheilectomies of the forefoot and midfoot
- ▶ Bunionette/Tailor's
- ▶ Rearfoot Application
- ▶ Exostosis
- ▶ Calcaneal osteotomies and hindfoot fusion

INSTRUMENTATION

Straight Isham Bone Cutting



Mini-straight Isham Bone Cutting



Burr Indications

- ▶ Standard Isham:
Metatarsal osteotomies
- ▶ Short Isham:
Digital Osteotomies and exostosis
- ▶ Mini Isham
Small exostosis end of toe

INSTRUMENTATION



3:1 Bone Reducing

Bur Indications

- ▶ Wedge Burr 3.1:

Medial eminence

Bunion Correction

Metatarsal osteotomy with large correction

INSTRUMENTATION



4:1 Bone Reducing

Bur Indications

- ▶ Wedge Burr 4.1:
Aggressive Medial Eminence Reduction
Bunion/Hallux Rigidus Correction

INSTRUMENTATION

THE WASHER:

Key to protect the power device from backwash of bone debris into the handpiece.



INSTRUMENTATION

Care and feeding of the handpiece

Key to protect the power device requires proper cleaning and lubrication



Washer

INSTRUMENTATION

Washer Placement on Bur



Isham vs Shannon 44 Surgeon's choice of course

Dr. Isham developed a burr that would put bone paste back into the osteotomy site to act as a vs the Shannon 44 which is a purely cutting burr that throws it off.

INSTRUMENTATION

Shannon Spiral vs Isham design



INSTRUMENTATION

Surgical Dressing Pack

- ▶ **Adaptic**
- ▶ **Steri-Strips**
- ▶ **4 x 4-inch gauze**
- ▶ **3 x 3-inch gauze**
- ▶ **Kling**
 - **3 -inch**
 - **2-inch**

INSTRUMENTATION



Fluoroscope Imaging

INSTRUMENTATION KEY TAKE AWAY:

▶ Chair:

Address Doctor and Patient Comfort



INSTRUMENTATION

KEY TAKE AWAY:

- ▶ **Be Prepared!**
- ▶ **Take care of your equipment.**
- ▶ **Positioning**
Address Doctor Comfort



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THANK YOU

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