

## In-office Diagnosis of Knee and Shoulder Conditions Using Mi-Eye 2<sup>®</sup>™ Arthroscopy



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## Disclosures

The presenter has no relevant financial relationships to be discussed, directly or indirectly, referred to or illustrated with or without recognition within this presentation.

## The Traditional Approach

- A patient presents with knee or shoulder pain.
- An examination is performed and x-rays reviewed.
- The decision is made on need for further imaging (MRI, CT), vs. conservative management (PT, injections, meds)
- A patient is seen back after 4-6 weeks and re-assessed. If no improvement, consideration again given to MRI.
- MRI has to be authorized through insurance → scheduled → another appointment to discuss results / plan.

## A Better Way: Mi-Eye 2™ In-office Diagnostic Needle Arthroscopy



# Mi-Eye 2™

## Technical Specs



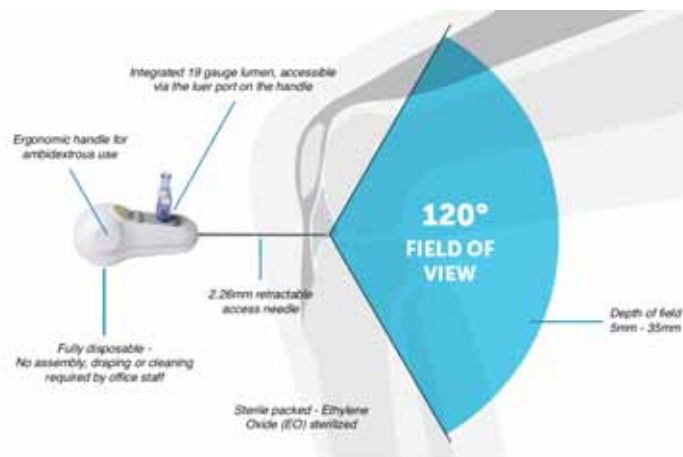
### mi-eye 2™ arthroscope

- 120° field of view
- 5–35mm depth of field
- Retractable 2.2mm needle
- Image and video capture
- Integrated optic and light source
- Ergonomic handle for one-handed/ambidextrous use

### Trice Tablet

- HD screen
- 10.8" display
- Live video with playback
- Save and share videos and images
- 1.6GHz Intel atom processor
- Go-anywhere portability

## Device Overview



## Indications - Knee

MRI Issues	Claustrophobia/Anxiety
	Stents/Implants
	Pacemakers/Defibrillators
	Cheaper/Quicker
Anticipated Pathology	Meniscus Tears
	Articular Defects
	Loose Bodies
	OA
Surgical Decision-making	Arthroscopy
	UKA/TKA
	2 <sup>nd</sup> Look
	Peer Review - 100% approval w/ peer review for OCD
Articular Cartilage Planning	ACI
	OATS
	Cartiform/Denovo
	Bulk Allograft
	Size, Depth, Surrounding hyaline cartilage

## Indications - Shoulder

MRI Issues	Claustrophobia/Anxiety
	Stents/Implants
	Pacemakers/Defibrillators
	Cheaper/Quicker
Anticipated Pathology	Loose Bodies
	Labral Tears
	Cuff Tears
	Bony Defect Eval (Hill-Sachs)
	OCD
	Biceps Tears
	Anchor Failure (Recurrent Tears)
	Screw Penetration (ORIF)
Surgical Decision-making	

## Future Indications

Indications - Wrist

TFC Tears
Articular Injury
SLIL Injury
Articular Reduction
Screw Penetration (Articular)

Indications - Elbow

Loose Bodies
Chondral Injury
FX Reduction

Indications - Ankle

No code yet available for pure "diagnostic" scope in ankle
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## The Real Benefits

By choosing mi-eye™, the average patient is back to his or her active life at least **2 weeks sooner\*** than when choosing an MRI.



## Set-up - Knee

- 10cc 1% lidocaine w/ epi (skin)
- 20cc 1% lidocaine w/ epi (intra-artic)
- Additional syringes (2-3) w/ 30cc saline (and basin for more fluid as needed)
- Chuck behind knee
- Foam roll or rolled towel behind knee
- Sterile ace around leg



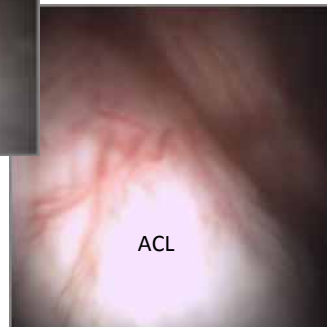
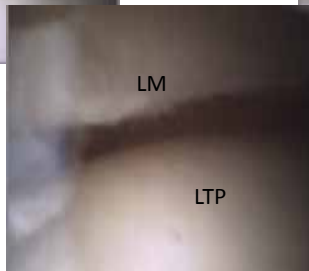
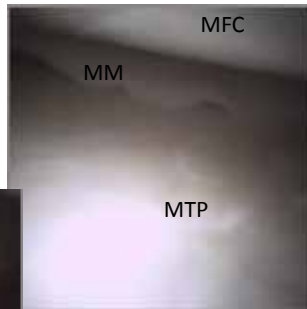
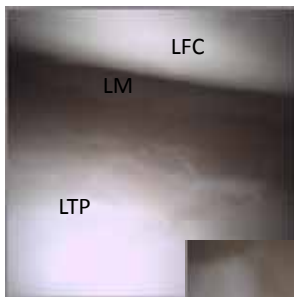
## What to Expect



Can also be done



### In-office Knee Arthroscopy – Mi-Eye 2™



## Clinical Examples

- 42 y/o female underwent a prior knee scope with partial meniscectomy.
- Did well for two months until sustaining another twisting injury through the knee.
- Ongoing pain on the medial side of the knee, not improving.
- Mild degenerative changes on x-ray.

**The Problem:** MRI can be more difficult to interpret in the post-operative period.

## In-office Mi-Eye 2™ Arthroscopic Knee Evaluation





## Clinical Examples

- 19 year old female athlete.
- Ongoing lateral knee pain after twisting injury through the knee three months earlier.
- Unresponsive to P.T., anti-inflammatory medications.
- Claustrophobic – considered medications to help with anxiety.

**The Problem:** Open MRI was an option – but decreased image quality & diagnostic accuracy.

## In-office Mi-Eye 2 <sup>TM</sup> Arthroscopic Knee Evaluation

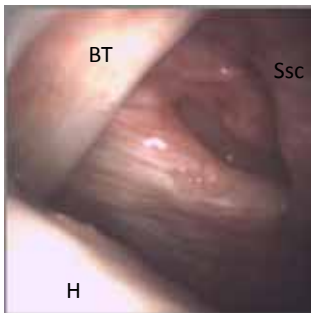


## Clinical Examples

- 63 y/o male 3 years after rotator cuff repair, sustained pulling injury through operative shoulder.
- Pain, loss of strength and ROM.
- Concern for re-tear of rotator cuff.
- Cannot undergo another MRI, as he now has a cardiac pacemaker
- Could obtain CT with contrast, but less accurate.

## Mi-Eye 2™ Shoulder Evaluation

**Intra-Articular Joint View**



**2<sup>nd</sup> Look After Rotator Cuff Repair**



## Potential Complications

### **Minor / Self-limiting Complications:** (10-13%)

- Bleeding
- Swelling
- Pain
- Vasovagal / Syncope

### **Major Complications** (0-1%)

- Infection
- Cartilage Damage
- Instrument breakage (theoretical)

## Benefits to the Patient

mi-eye 2

- Potential for decreased time from injury to recovery
  - By getting answers within the first office visit, the patient has the opportunity to get scheduled for surgery or conservative care faster than if they had to get additional indirect diagnostics performed
- Peace of mind
  - Patients now have the opportunity to find out exactly what is going on with them, immediately
- Potential to avoid unnecessary trip to the OR
  - mi-eye 2™ has the potential to avoid the false reads of the MRI and unnecessary exploratory surgeries
- No more expensive co-pays associated with MRIs

## Patient Satisfaction

- **88.7%** of patients would prefer a mi-eye 2™ procedure over an MRI, given the benefits of getting an immediate answer
- **95%** valued a real time diagnosis, over cost
- **88.6%** of patients would prefer a mi-eye 2™ over and MRI, knowing the benefits of both options
- **86%** of patients polled would defer their diagnostic procedural decision to what the doctor recommended
- **Little to no pain** experienced in patients ranging from 14 to 86 years old.

mi-eye 2



## Questions?



Thank You!

A photograph of a modern, multi-story office building with large glass windows. The building has "LECOM" written on the facade above the entrance. In the foreground, there is a white stone sign with "LECOM" and "College of Osteopathic Medicine" written on it. The building is surrounded by greenery and trees under a blue sky with light clouds.

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