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Cours de Base sur Specimen
Chirurgie mini-invasive
et percutanée du pied
18 DECEMBER 2022
Barcelone - Espagne

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Cours en français



Hallux Valgus GRECMIP Consensus

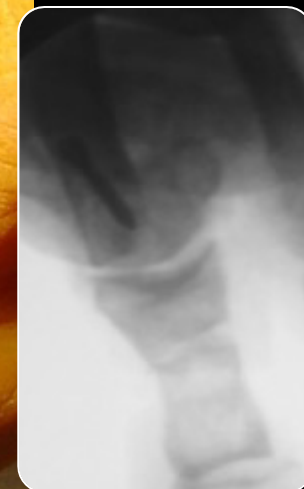
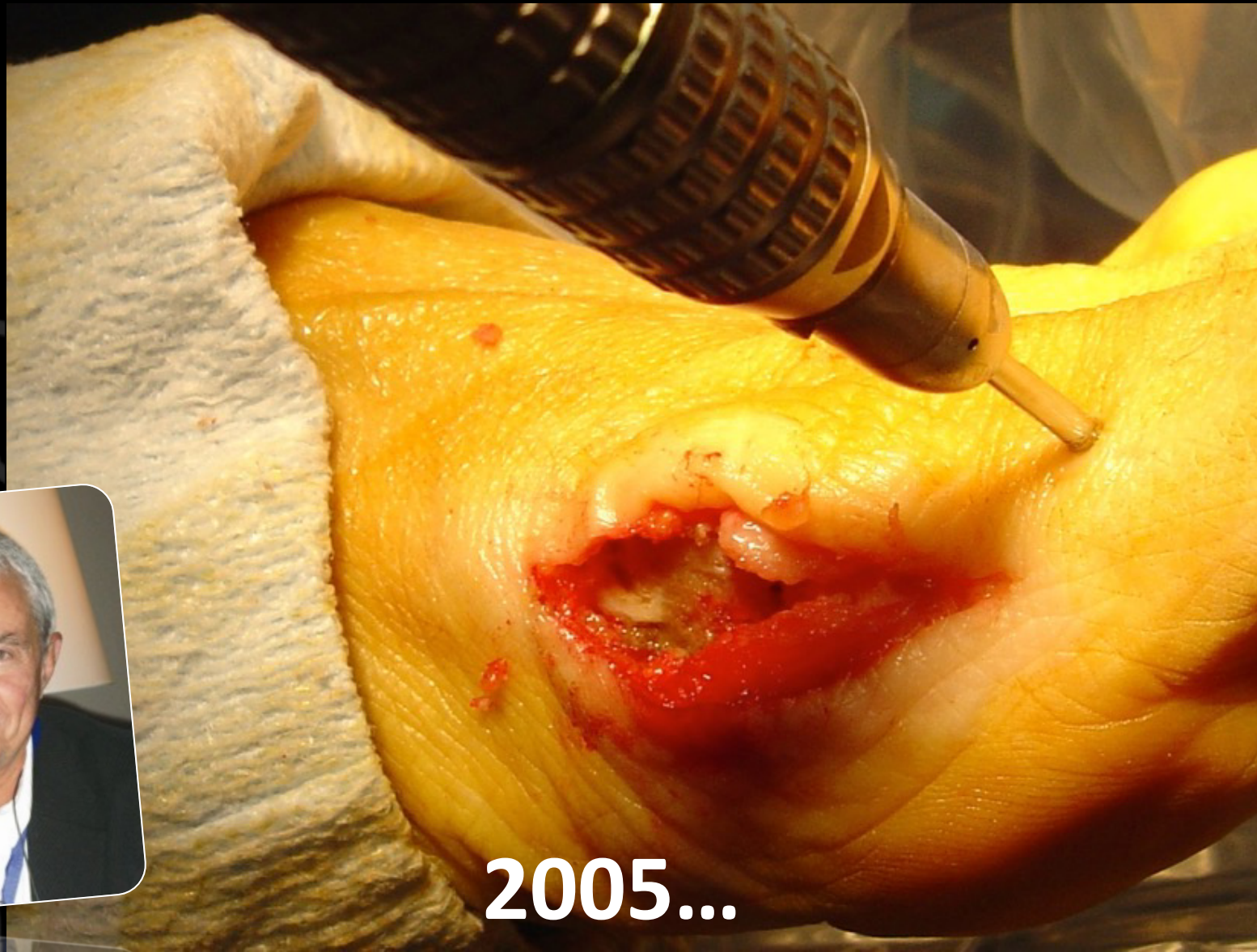
Olivier Laffenetre
France



HALLUX VALGUS SURGERY – GRECMIP CONSENSUS



EVOLUTION : *Chevron* « *minimally-invasive* »



2005...

EVOLUTION ACTUELLE : PERC & MICA

Full & Management and Orthopaedics

Springer Science+Business Media

Percutaneous Chevron; the union of classic stable fixed approach and percutaneous technique

Die perkutane Chevronosteotomie: Die Kombination von klassischer stabiler Fixation und perkutaner Osteotomietechnik

Joel Vernas, David Redfern, the GRECMIP

Abstract: The aim of this paper is to describe the evolution of the percutaneous chevron osteotomy technique. This technique is a union of the classic stable fixed approach and the percutaneous technique. It is a safe and effective technique for the treatment of hallux valgus. The aim of this paper is to describe the evolution of the percutaneous chevron osteotomy technique. This technique is a union of the classic stable fixed approach and the percutaneous technique. It is a safe and effective technique for the treatment of hallux valgus.

Revue de l'Académie Nationale de Chirurgie, 2014, 11 (3) : 043-049

Évolution de la chirurgie percutanée du premier rayon en 2013

Percutaneous Hallux Valgus Surgery in 2013: Current Concept

O Laffont, P Golani et le GRECMIP (Groupe de Recherche et d'Étude en Chirurgie Mini Invasive du Pied).

Résumé
L'objectif de ce travail est de décrire l'évolution de la chirurgie percutanée du premier rayon en 2013. Cette technique est une union de l'approche classique stable fixe et de la technique percutanée. Elle est sûre et efficace pour le traitement de l'hallux valgus.

Abstract
The aim of this paper is to describe the evolution of the percutaneous chevron osteotomy technique. This technique is a union of the classic stable fixed approach and the percutaneous technique. It is a safe and effective technique for the treatment of hallux valgus.

Journal of Orthopaedics, Trauma and Rehabilitation

Correspondence: www.jotr.com & www.jotr.com

Original Article

Percutaneous Chevron Osteotomy in Treating Hallux Valgus: Hong Kong Experience and Mid-Term Results

經皮 Chevron 截骨術治療外翻：香港的經驗和中期結果

Lam Ka-Lee Kary, Kong Siu-Wah, Chow Yuen-Hoo

ABSTRACT
Background/Purpose: Minimally invasive surgery (MIS) has become popular in orthopaedics. Different MIS techniques have been reported to treat hallux valgus. The aim of this study was to evaluate the results of percutaneous chevron osteotomy in treating hallux valgus.

International Orthopaedics

MINIMALLY INVASIVE SURGERY FOR HALLUX VALGUS. A SYSTEMATIC REVIEW OF CURRENT SURGICAL TECHNIQUES.

—Manuscript Draft—

Manuscript Number:	INOR-D-18-00576R2
Full Title:	MINIMALLY INVASIVE SURGERY FOR HALLUX VALGUS. A SYSTEMATIC REVIEW OF CURRENT SURGICAL TECHNIQUES.
Article Type:	Review
Funding Information:	
Abstract:	<p>Purpose The aim of this study was to systematically evaluate the available literature on minimally invasive surgical (MIS) treatment for hallux valgus and to provide an overview of the different surgical techniques.</p> <p>Methods A systematic review of the literature available in MEDLINE, EMBASE and the Cochrane database was performed including studies from January 2001 to 1st January 2018. The radiological outcomes (hallux valgus angle - HVA, intermetatarsal angle - IMA), complication rates and clinical outcome scores were evaluated. The MINORS scale was used to assess the methodological quality of included articles.</p> <p>Results A total of 278 reviewed articles, 23 met the inclusion criteria. The included studies reported on 1782 procedures in 1782 patients. The surgical techniques were divided into five categories: the Bosch technique, MIS Chevron-Akin, Reverdin-Isham and procedure, Endolog system, and techniques involving distal soft tissue release and fixation. Results regarding radiological correction, clinical outcomes, and complication rates varied widely.</p> <p>Conclusions The studies included were of too little level of evidence to allow for data pooling or meta-analysis. There were too few studies on each surgical technique category to assess whether one is more effective than the rest. However, there is some evidence that the Chevron and Akin showed the most potential for improvement of the HVA and that the Chevron and Akin showed the most potential for improvement of the IMA. An overall complication rate of 13% was obtained among all included studies. Appropriately powered randomised controlled trials, utilizing validated outcome measures, blinded assessors and long-term follow up are needed to assess the efficacy of MIS techniques.</p>
Corresponding Author:	Francisco Malagelada Royal London Hospital, Barts Health NHS Trust London, UNITED KINGDOM

THE BONE & JOINT JOURNAL

FOOT AND ANKLE

Treatment of moderate hallux valgus by percutaneous, extra-articular reverse-L Chevron (PERC) osteotomy

J. Lucas y Hernandez, P. Golani, S. Roshan-Zamir, V. Darcel, D. Chauvcaux, O. Laffont

Aims
The aim of this study was to report a single surgeon series of consecutive patients with moderate hallux valgus managed with a percutaneous extra-articular reverse-L chevron (PERC) osteotomy.

Patients and Methods
A total of 38 patients underwent 45 procedures. There were 25 women and three men. The mean age of the patients was 48 years (17 to 69). An additional percutaneous Akin osteotomy was performed in 37 feet and percutaneous lateral capsular release was performed in 22 feet. Clinical and radiological assessments included the type of forefoot, range of movement, the American Orthopaedic Foot and Ankle (AOFAS) score, a subjective rating and radiological parameters. The mean follow-up was 59.1 months (45 to 75.2). No patients were lost to follow-up.

Results
The mean AOFAS score post-operatively. A statistically significant proximal interphalangeal joint improved signifiantly to 921 (75 to 100).

Conclusion
Preliminary results are reproducible. It takes home message management of MTPJ range of motion.

Cite this article:
Hallux valgus is a lead to transfer deformities. Sur when the patient osity with footwey metatarsal osteo adapted for mini surgery. Percut perform, reduce 2012 an i group Groupe d'urgie Mini-Inva founded to eval techniques in fo The Reverdin was described i

Editor
ANTHONY PERERA

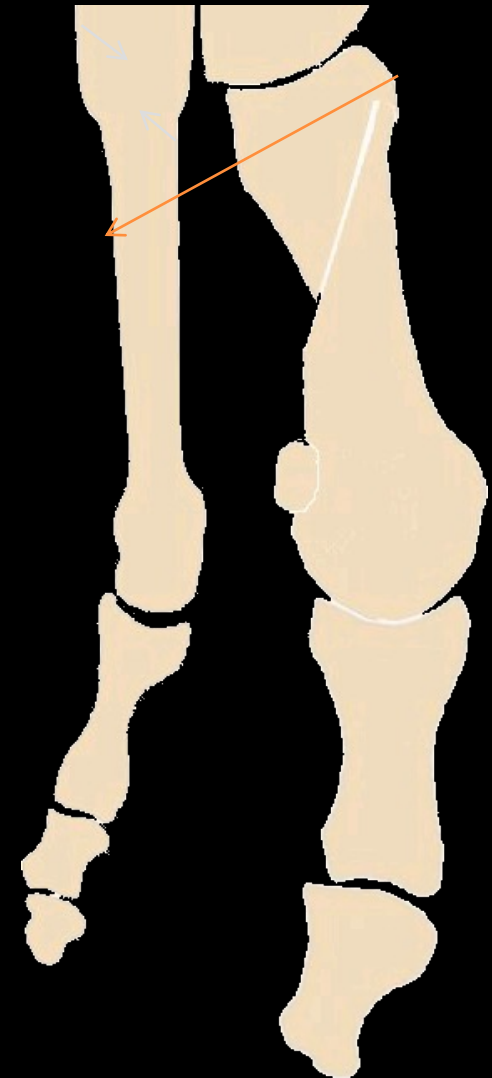
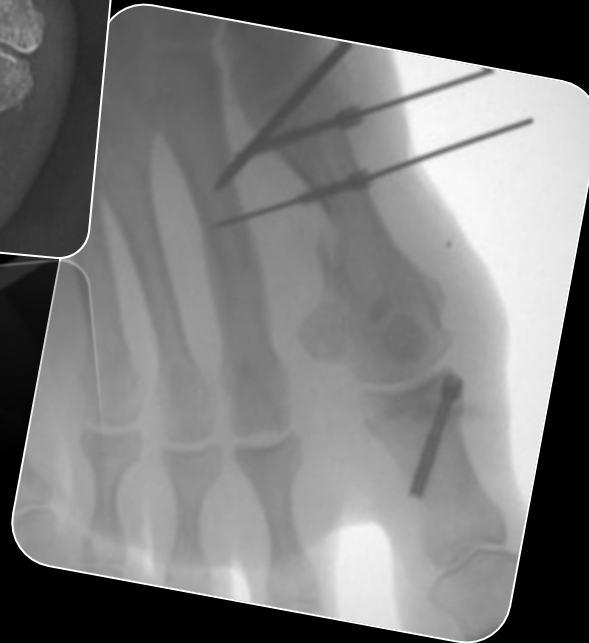
FOOT AND ANKLE CLINICS

www.foot.theclinics.com

Consulting Editor
MARK S. MYERSON

September 2016 • Volume 21 • Number 3

EVOLUTION : techniques percutanées avancées



INDICATIONS

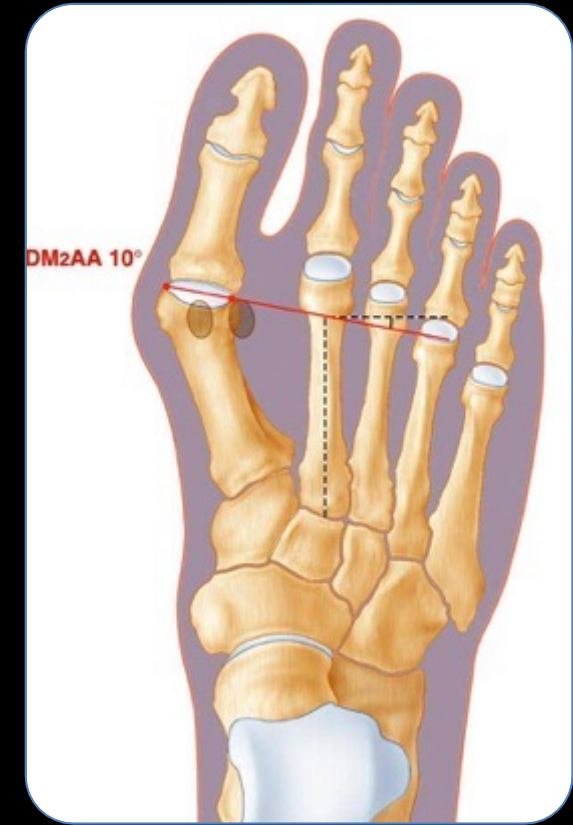
Plus de 130 techniques chirurgicales décrites

- ✓ Nombreuses ostéotomies métatarsiennes
- ✓ Chirurgie ambulatoire
 - Problème du contrôle de la douleur
- ✓ Développement de la chirurgie percutanée et hybride
 - Problème de l'efficacité des gestes

Robinson A.H.N ,Limbers J.P : Modern concepts in the treatment of hallux valgus.
J. Bone Joint Surg, vol 87-B, 8 ,p 1038-1045, 2005

INDICATIONS

- ✓ **Importance de la déformation**
 - Varus métatarsien (M1-M2 / IMA)
 - Angle métatarso-phalangien (M1-P1 / HVA)
- ✓ **Caractéristiques de la déformation**
 - Réductible ou non
 - Angles DMAA, DM2AA
 - Inclinaison de la cunéo-métatarsienne
 - Mobilité cunéo-métatarsienne
- ✓ **Critères anatomiques du pied**
 - Formule métatarsienne
 - Forme de l'avant-pied
- ✓ **Etat articulaire de la métatarso-phalangienne**
- ✓ **Age**



INDICATIONS

Mineur

HVA $< 20^\circ$

IMA $< 15^\circ$



Sévère

HVA $> 40^\circ$

IMA $> 20^\circ$



Modéré

$20^\circ < \text{HVA} < 40^\circ$

$15^\circ < \text{IMA} < 20^\circ$



XXL

HVA $> 50^\circ$

IMA $> 25^\circ$



INDICATIONS : clefs

- ✓ Correction des angulations
 - HVA
 - DMAA
 - IMA
- ✓ Maintien d'une longueur adaptée du premier métatarsien
- ✓ Prévention d'une longueur prédominante de O1 sur O2
- ✓ Restauration d'un appui pulpaire du gros orteil
- ✓ Conservation d'une mobilité suffisante de la 1ere MP

Préservation de la vascularisation de la tête

INDICATIONS : clefs

- ✓ Maintenir une bonne congruence

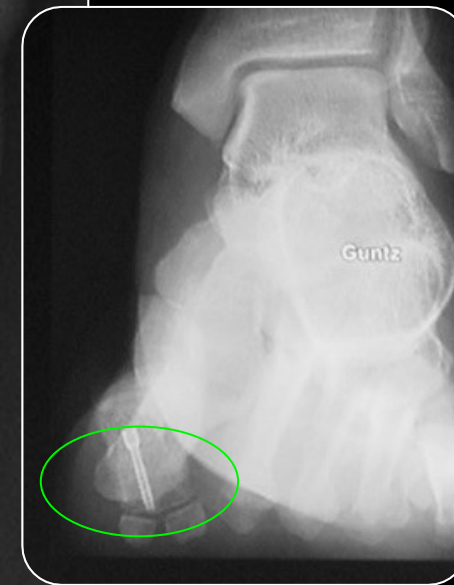


Déformation congénitale :
1/3 à 3/4 des cas !!



- Idéalement nul
- $DM2AA = DMAA - IMA$
- Positif si l'orientation de la tête est vers M2
- Négatif dans l'autre sens

INDICATIONS : clefts



INDICATIONS : questions à se poser

- Importance du métatarsus varus (IMA)
- Importance de l'angle métatarso-phalangien (HVA)
- Déséquilibre ou non du DMMA
- Etat de l'articulation métatarso-phalangienne
- Orientation de la cunéo-métatarsienne
- Chirurgie ou non de première intention
- Age, demande fonctionnelle, tares éventuelles...
- EXPERIENCE

TRES SEVERE



20°

SEVERE



15°

MODERE



10°

MINEUR



0°

IMA

INDICATIONS Grecmip

HV MINEUR + DMAA normal

1. Bunionectomie
2. Arthrolyse
3. Ostéotomie P1



Pas d'effet sur l'IMA
Pas d'effet sur le DMAA
Petite correction de l'HVA
Alignement de l'hallux avec le LFH
Stabilité de l'ostéotomie de P1 essentielle (fixation ?)

TRES SEVERE

SEVERE

MODERE

MINEUR

IMA

20°

15°



10°



0°

INDICATIONS Grecmip

HV MINEUR + DMAA pathologique

OSTEOTOMIES DISTALES

Indications limitées < 2%

HV congénital – adolescents

Enthousiastes !!! (M. de Prado)

1ère intention

HVA < 30°

IMA < 16°

Articulation congruente, non arthrosique et souple

Flexion dorsale ≥ 90°



Inconvénients

- Difficile
- Fluoroscanner
- Non fixée (déplacement)
- Faible correction IMA
- Raideur - incongruence

TRES SEVERE

SEVERE

MODERE

MINEUR

IMA

20°

15°

10°

0°



1,
2,
3,
4

INDICATIONS Grecmip

OSTEOTOMIES DISTALES

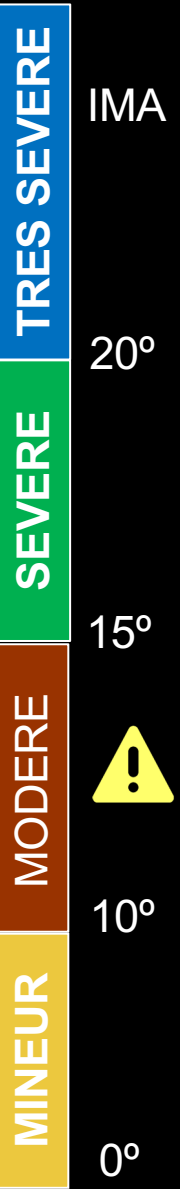
HV MINEUR & MODERE + DMAA pathologique



Chevron percutané fixé (PERC – MICA)
Scarf percutané, Bosh

MIS

Chevron ou scarf hybrides
Biseau



INDICATIONS Grecmip

HV SEVERE

OSTEOTOMIES DISTALES et DOUBLES

$20 < \text{IMA} < 25^\circ$

Percutané

**Base et doubles ostéotomies
PERC modifié – MICA
Scarf percutané**

MIS

**Base et doubles ostéotomies
Scarf
Biseau**



TRES SEVERE

SEVERE

MODERE

MINEUR

IMA

20°

15°

10°

0°



INDICATIONS Grecmip

HV XXL

DMAA Pathologique
IMA > 25°

Percutané

MIS

Scarf
Biseau
Arthrodèses



OSTEOTOMIES DOUBLES et COMPLEXES
ARTHRODESES MTP1

CHEVRON PERCUTANE

PERC modifié - MICA !!!



DOUBLE OSTEOTOMIE
Base

Akin (fixé)

+/- Chevron percutané
ou Isham-Reverdin



ARTHRODESES

Distale

Lapidus

TRES SEVERE

IMA



20°

SEVERE

15°

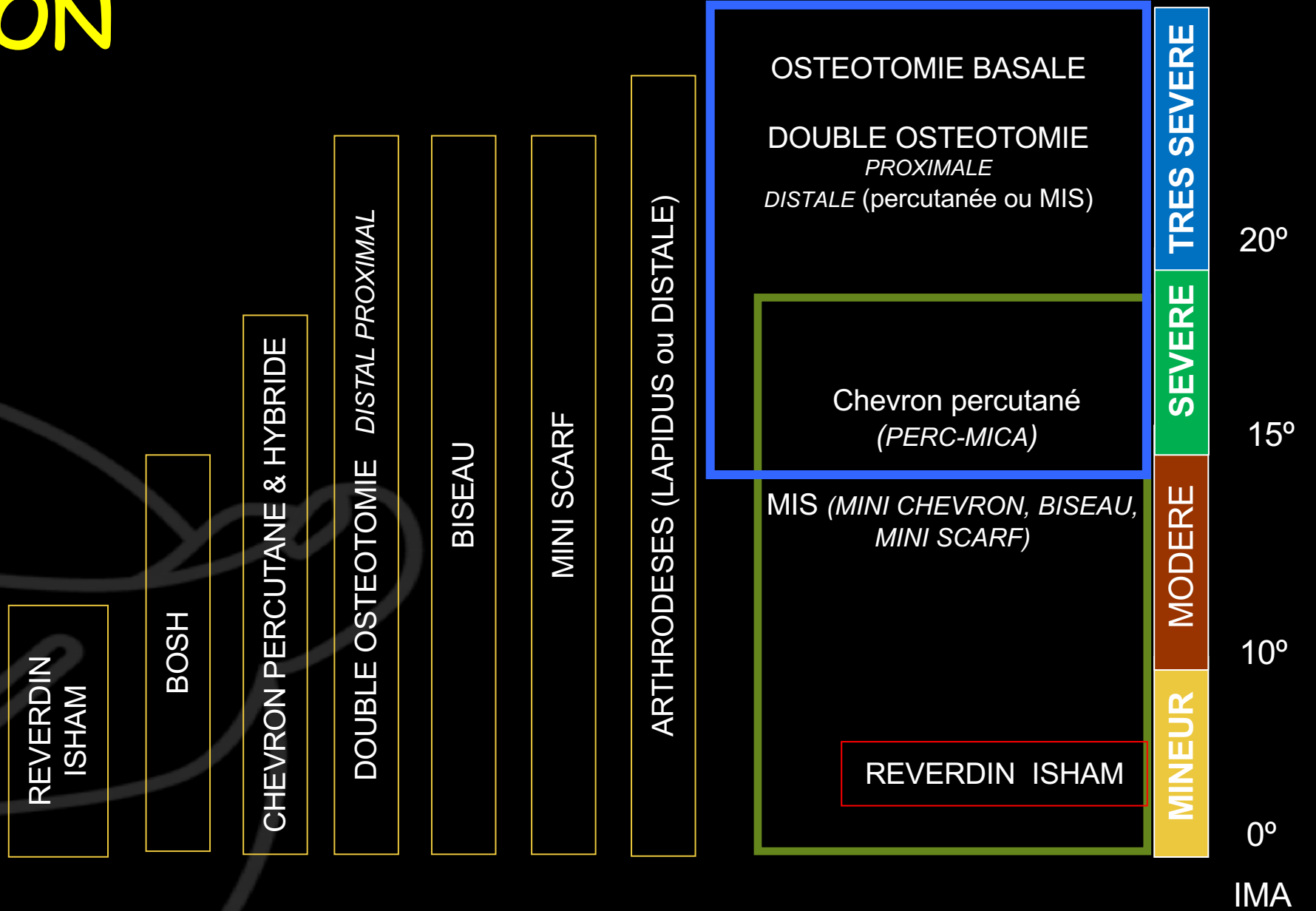
MODERE

10°

MINEUR

0°

CONCLUSION



And if you want to learn more...

Welcome in Brazil



VENUE
Windsor Barra Hotel

OFFICIAL LANGUAGE
English 

**6th International Congress
of Foot & Ankle Minimally
Invasive Surgery**

5-7 October | Rio de Janeiro
2023 | Brazil



Merci



MIFAS
by Greemip