

## **CLASSIFICAÇÃO DE LESÃO MENISCAL NA RM**

TIPO I = HIPERSINAL DESIGUAL QUE NÃO TOCA AS BORDAS

TIPO II = SINAL LINEAR DEFINIDO QUE NÃO TOCA AS BORDAS

TIPO III = SINAL LINEAR DEFINIDO QUE TOCA PELO MENOS UMA DAS BORDAS DO MENISCO

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## **CLASSIFICAÇÃO DE Saupe PARA PATELA BIPARTIDA**

TIPO I = POLO INFERIOR DA PATELA (5%)

TIPO II = MARGEM LATERAL (20%)

TIPO III = SUPEROLATERAL (75%)

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## **CLASSIFICAÇÃO DE Burleson PARA CISTO POPLÍTEO**

TIPO I = 1-2MM DE PAREDE, FIBROSA COM ENDOTELIO

TIPO II = PAREDE + ESPESSA COM CELULAS CUBÓIDES

TIPO III = PAREDE COM MAIS DE 8MM DE ESPESSURA COM LINFÓCITOS E HISTIÓCITOS

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## **CLASSIFICAÇÃO DE Sakakiraba PARA PLICA SINOVIAL**

TIPO A = ELEVAÇÃO TIPO CORDÃO NA PAREDE MEDIAL

TIPO B = PRATELEIRA QUE NÃO COBRE O CONDILO MEDIAL

TIPO C = PRATELEIRA QUE COBRE O CONDILO MEDIAL

TIPO D = DUPLA INSERÇÃO MEDIAL

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## **CLASSIFICAÇÃO DE Efusão Articular**

TIPO 1 = SEM DERRAME ARTICULAR

TIPO 2 = LIGEIRAMENTE ELEVADA

TIPO 3 = PATELA BALÃO

TIPO 4 = DERRAME ARTICULAR IMPORTANTE IMOBILIZANDO A PATELA

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## CLASSIFICAÇÃO DE OUTERBRIDGE/ICRS / NOYES

**Table 8-2** Chondral Injury Classifications

Outerbridge	ICRS	Noyes
Grade I: softening and swelling of cartilage	Grade 0: normal cartilage	Grade 1: intact cartilage surface
Grade II: cartilage fragmentation and fissuring <1.5 cm diameter	Grade 1: increased T2 signal in the cartilage	Grade 2A: cartilage surface damaged with <50% thickness involved
Grade III: fragmentation and fissuring >1.5 cm diameter	Grade 2: partial-thickness defect <50% of normal cartilage thickness	Grade 2B: cartilage defects involve >50% cartilage thickness
Grade IV: cartilage erosion to bone	Grade 3: partial-thickness defect >50% of normal cartilage thickness Grade 4: full-thickness defect	Grade 3: bone exposed (3A cortical surface intact, 3B cortical surface cavitation)

ICRS, International Cartilage Repair Society.

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### **Berndt and Harty - OSTEOCONDRITE DISSECANTE**

*Stage 1 = no discontinuity between the osteochondral lesion and surrounding bone*

*Stage 2 = a partially detached but stable osteochondral lesion*

*Stage 3 = a completely detached osteochondral lesion that is not dislocated*

*Stage 4 = a completely detached and displaced osteochondral fragment.*

## **Anderson MRI classification of OCD**

*Stage I = bone marrow edema*

*Stage IIa = underlying subchondral cystic change*

*Stage IIb = partially detached osteochondral lesion with bone marrow edema*

*Stage III = fluid undermining a nondisplaced and completely detached osteochondral lesion*

*Stage IV = a completely detached and displaced osteochondral fragment*

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## **CLASSIFICAÇÃO DE Koshino modificada por Aglietti - OSTEONECROSE**

*ESTAGIO 1 = RADIOGRAFIA NORMAL*

*ESTÁGIO 2 = ACHATAMENTO + HALO RADIOLUCIDO*

*ESTÁGIO 3 = LESÃO RADIOLUCIDA E LEVE ESCLEROSE*

*ESTÁGIO 4 = LESÃO RADIOLUZENTE COM COLAPSO DO OSSO  
SUBCONDRA*

*ESTÁGIO 5 = DEGENERAÇÃO E ACOMETIMENTO EROSIVO  
FEMORAL E TIBIAL*

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## **CLASSIFICAÇÃO DE Guhl PARA DEFORMIDADES OCD ARTROSCÓPICA**

*TIPO I = NORMAL*

*TIPO II = FRAG. IN SITU*

*TIPO III = FRAGMENTO PARCIALMENTE DESTACADO*

*TIPO IV = FRAGMENTO DESTACADO*

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## **CLASSIFICAÇÃO DE Ogden PARA LUX TIBIO FIBULAR PROX**

4 TIPOS

LUXAÇÃO ATRAUMÁTICA

ANTERO LATERAL - HIPERFLEXÃO COM PÉ EM INVERSÃO E FLEX PLANTAR

POSTEROMEDIAL - TRAUMA DIRETO OU TORSIONAL

SUPERIOR - TRAUMA DE ALTA ENERGIA

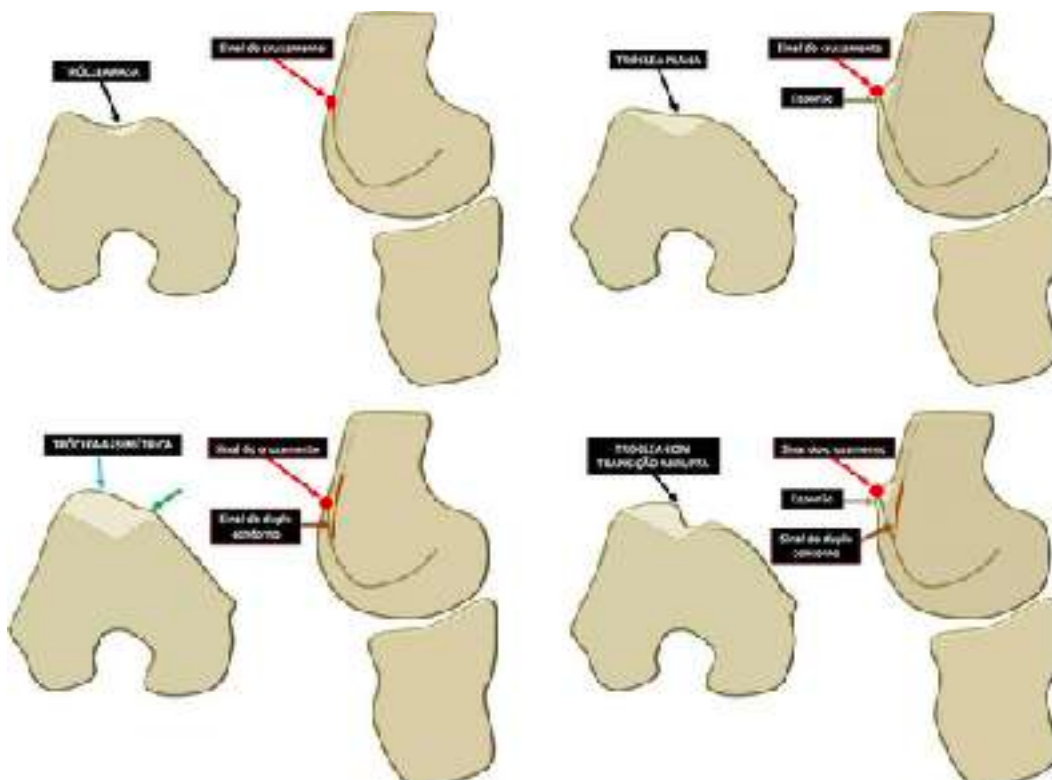
## **CLASSIFICAÇÃO DE KRACKOW PARA DEFORMIDADES EM VALGO NAS ARTROPLASTIAS ( PAG.1377 INSALL)**

TIPO I = PERDA OSSEA DO CONDILO LATERAL + CONTRATURA DE PARTES MOLES LATERAL COM ESTRUTURAS MEDIAIS INTACTAS

TIPO II = IGUAL AO TIPO I COM ALONGAMENTO DAS ESTRUTURAS MEDIAIS

TIPO III = DEFORMIDADE EM VALGO SEVERA COM ALTERAÇÃO DA INTERLINHA ARTICULAR (EX; SECUNDÁRIO A OSTEOTOMIA)

## **CLASSIFICAÇÃO DE DEJOUR**



## CLASSIFICAÇÃO DE **GRELSAMER** - COMPRIMENTO PATELAR

Relação A/B onde A é o comprimento do polo superior ao inferior e B o comprimento da face articular

TIPO 1 -RELAÇÃO ENTRE 1,2-1,5

TIPO 2 - RELAÇÃO MAIOR QUE 1,5 ( LONGO NARIZ)

TIPO 3 - RELAÇÃO MENOR QUE 1,2 ( NARIZ CURTO)

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## CLASSIFICAÇÃO DE **Maldague e Malghem** PARA INCLINAÇÃO LATERAL DA PATELA

TIPO I = LINHA DA FACETA LATERAL É ANTERIOR A LINHA DA CRISTA MEDIANA

TIPO II = LINHA DA FACETA LATERAL É ALINHADA COM A LINHA DA CRISTA MEDIANA

TIPO III = LINHA DA FACETA LATERAL É POSTERIOR A LINHA DA CRISTA MEDIANA

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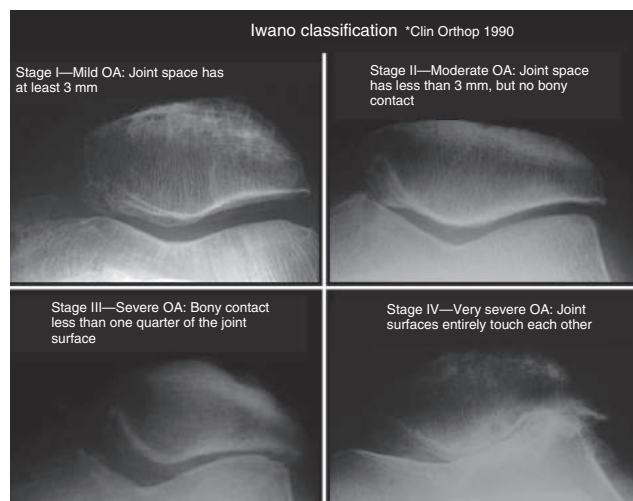
## CLASSIFICAÇÃO DE **Iwano** PARA INCLINAÇÃO **OA** DA PATELA

ESTÁGIO I = OA LEVE E ESPAÇO DE 3 MM MINIMO

ESTÁGIO II = OA MODERADA COM ESPAÇO MENOR DE 3MM SEM CONTATO OSSEO

ESTÁGIO III = OA SEVERA E CONTATO OSSEO EM MENOS DE 1/4 DA PATELA

ESTÁGIO IV = OA MUITO SEVERA COM CONTATO OSSEO TOTAL



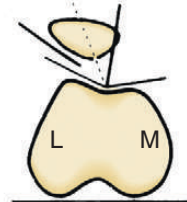
## **CLASSIFICAÇÃO NA TC DE MAU ALINHAMENTO DA PATELA**

TIPO 1 = SUBLUXAÇÃO SEM INCLINAÇÃO

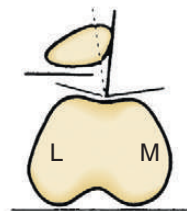
TIPO 2 = SUBLUXAÇÃO COM INCLINAÇÃO

TIPO 3 = INCLINAÇÃO SEM SUBLUXAÇÃO

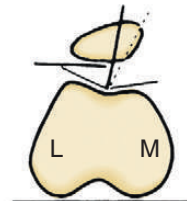
Type 1: Sublux without tilt  
18 patients, 21 knees



Type 2: Sublux with tilt  
14 patients, 19 knees

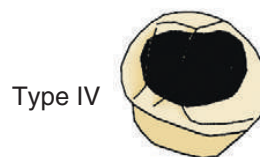


Type 3: Tilt without sublux  
19 patients, 25 knees



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## **CLASSIFICAÇÃO DE Pidoriano PARA LESÃO CONDRAI DA PATELA**



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## CLASSIFICAÇÃO DE **Arnold e Hilgartner** PARA Artropatia Hemofilica

**Table 73-3** Arnold and Hilgartner's Radiographic Classification of Hemophilic Arthropathy

Stage	Radiographic Finding
0	Normal knee
I	Soft tissue swelling
II	Soft tissue swelling, osteopenia, epiphyseal overgrowth, no narrowing of joint space
III	No significant narrowing of joint space, subchondral cysts, osteopenia
IV	Destruction of cartilage and narrowing of joint space
V	End stage, with destruction of joint and gross bony changes

Data from Arnold WD, Hilgartner MW: Hemophilic arthropathy. J Bone Joint Surg Am 59:287, 1977.

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## CLASSIFICAÇÃO DE DOR COMPLEXA REGIONAL

### Box 75-1 IASP Diagnostic Criteria for Complex Regional Pain Syndrome (CRPS)

#### CRPS Type I

- Presence of an initiating noxious event or a cause of immobilization
- Continuing pain, allodynia, or hyperalgesia in which the pain is disproportionate to any inciting event
- Evidence at some time of edema, changes in skin blood flow (skin color changes, skin temperature changes  $>1.1^{\circ}\text{C}$ , difference from the homologous body part), or abnormal sudomotor activity in the region of pain
- Diagnosis excluded by the existence of conditions that otherwise would account for the degree of pain and dysfunction

#### CRPS Type II

- Presence of continuing pain, allodynia, or hyperalgesia after a nerve injury, not limited to the distribution of the injured nerve
- Evidence at some time of edema, changes in skin blood flow (skin color changes, skin temperature changes  $>1.1^{\circ}\text{C}$ ), or abnormal sudomotor activity in the region of pain
- Diagnosis excluded by the existence of conditions that otherwise would account for the degree of pain and dysfunction

Adapted from Merskey H, Bogduk N: Classification of chronic pain, Seattle, Wash, 1994, IASP Press.

IASP, International Association for the Study of Pain.

## ***CLASSIFICAÇÃO DE OCD Juvenil na RM e cintilografia***

**Table 87-1** MRI Classification of Juvenile Osteochondritis Dissecans

Stage	MRI Finding
I	Small change of signal without clear margins of fragment
II	Osteochondral fragment with clear margins, but without fluid between fragment and underlying bone
III	Fluid visible partially between fragment and underlying bone
IV	Fluid completely surrounding the fragment, but the fragment is still in situ
V	Fragment completely detached and displaced (loose body)

Data from Hefti F, Berguirstain J, Krauspe R, et al: Osteochondritis dissecans: a multicenter study of the European Pediatric Orthopedic Society. *J Pediatr Orthop* 8B:231–245, 1999.

**Table 87-2** Bone Scan Classification of Juvenile Osteochondritis Dissecans Lesions

Stage	Bone Scan Finding
0	Normal radiographic and scintigraphic appearance
I	Lesion visible on plain radiographs, but bone scan reveals normal findings
II	Bone scan reveals increased uptake in the area of the lesion
III	Increased isotopic uptake in the entire femoral condyle
IV	Uptake in the tibial plateau opposite the lesion

Data from Cahill BR: Osteochondritis dissecans of the knee: treatment of juvenile and adult forms. *J Am Acad Orthop Surg* 3:237–247, 1995.

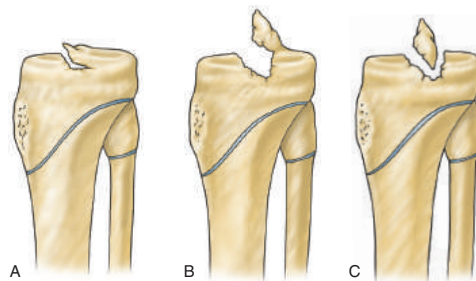


## Estagios de Tanner

**Table 88-1** Tanner Stages of Development

Tanner Stage	SEXUAL CHARACTERISTICS	
	Boys	Girls
I (prepubescent)	No pubic hair Testes <4 mL or <2.5 cm	No pubic hair No breast development
II	Minimal pubic hair at base of penis Testes 4 mL or 2.5-3.2 cm	Minimal pubic hair on labia Breast buds
III (pubescent)	Testes 12 mL or 3.6 cm Pubic hair over pubis Voice changes Muscle mass increases	Pubic hair on mons pubis Elevation of breast; enlargement of areolae Axillary hair Acne
IV	Adult pubic hair Testes 4.1-4.5 cm Axillary hair Acne	Adult pubic hair Areolae enlargement
V (postpubescent)	No growth Adult testes Adult facial hair Adult physique	No growth Adult breast shape Adult pubic hair

## **CLASSIFICAÇÃO DE Mayers e McKeever fratura de espinha tibial**



**Figure 89-3.** Meyers and McKeever classification system of tibial spine fracture in children. **A**, Type 1: minimal displacement. **B**, Type 2: displaced and hinged posteriorly. **C**, Type 3: complete displacement.

*Tipo 1 - mínimo desvio*

*Tipo 2 - desvio e dobrada posteriormente*

*Tipo 3 - completamente desviada*

## **CLASSIFICAÇÃO DE TONES e LAACS de instabilidade Femuropatelar**

**Table 91-1** Classification of Patellofemoral Instability in Young Patients: TONES and LAACS

<b>T</b>	Traumatic, sports-related injury mechanisms
<b>O</b>	Older at initial dislocation, Osteochondral fractures more common
<b>N</b>	Normal patellofemoral architecture, Normal ligamentous function
<b>E</b>	Equal sex distribution
<b>S</b>	Single occurrence, Single-leg involvement
<b>L</b>	Laxity, generalized, Lower age at onset
<b>A</b>	Atraumatic in nature
<b>A</b>	Abnormal patellofemoral architecture, Abnormal ligamentous laxity
<b>C</b>	Chronic in nature, Contralateral involvement
<b>S</b>	Sex dependent, with greater number of females

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## **CLASSIFICAÇÃO DE Anders Runow de instabilidade Femuropatelar pediátrica**

**Grupo 1** - had only minimal patella alta (Insall ratio of 1.0 to 1.3), minimal trochlear dysplasia, and no generalized hyperlaxity. Significant trauma causing the dislocation; they had an average age at initial onset of 19 and a low rate of recurrence, and osteochondral fractures occurred in 63%.

**Grupo 2** - had generalized hyperlaxity and an Insall ratio of 1.0 to 1.3

**Grupo 3** - had normal soft tissue function but an Insall ratio greater than 1.3

**Grupo 4** - demonstrated both hyperlaxity and severe patella alta. the recurrence rate was 74%, bilateral involvement occurred in 68%

## **CLASSIFICAÇÃO DE Fratura de Patela na ATJ- Mayo Clinic**

Tipo 1- implante estável e mecanismo extensor intacto

Tipo 2- implante estável e mecanismo extensor interrompido

Tipo 3- implante instável e mecanismo extensor intacto

3A - bom estoque osseo

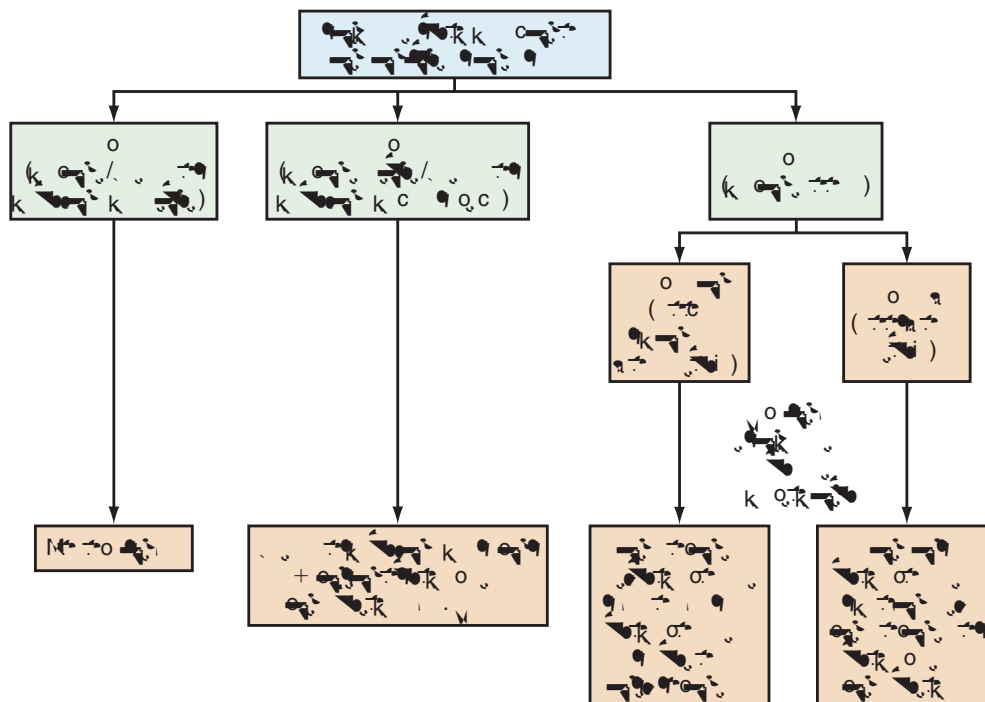
3B - estoque osseo comprometido com menos de 10mm ou cominuição

## **CLASSIFICAÇÃO DE Ortiguera e Berry - Frat Patela**

**Table 132-1** Classification of Periprosthetic Patellar Tracking According to Ortiguera

Type I	Extensor mechanism intact; patellar implant well fixed
Type II	Extensor mechanism disrupted
Type IIIa	Patellar implant loose; patellar bone stock allows revision
Type IIIb	Patellar implant loose; patellar bone stock does not allow revision

From Ortiguera CJ, Berry DJ: Patellar fracture after total knee arthroplasty. J Bone Joint Surg Am 84:532–540, 2002.



**Figure 132-1.** Classification and treatment algorithm proposed by Ortiguera and Berry.<sup>28</sup>

## ***CLASSIFICAÇÃO DE Rorabeck - Frat Patela***

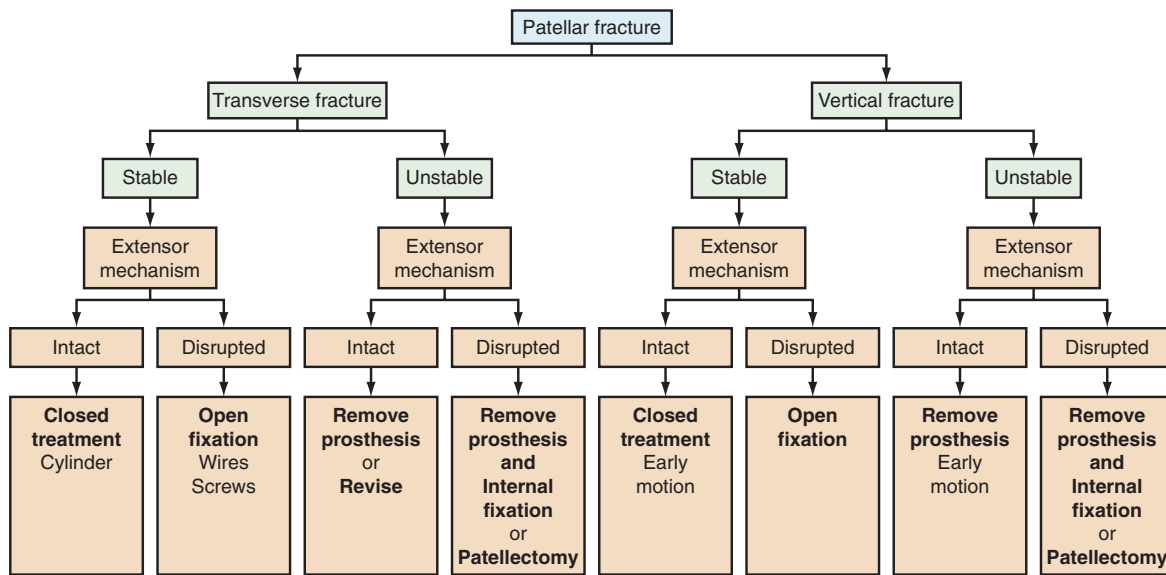


Figure 132-2. Classification and treatment algorithm proposed by Rorabeck and colleagues.<sup>34</sup>

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## ***CLASSIFICAÇÃO DE Goldberg - Frat Patela***

*Tipo 1- fraturas com mecanismo extensor e implante intactos*

*Tipo 2- fraturas com mecanismo extensor e implante rompido*

*Tipo 3A- fraturas com mecanismo extensor rompido e fratura do polo inferior da patela*

*Tipo 3B- fraturas com mecanismo extensor mantido e fratura do polo inferior da patela*

*Tipo 4- fraturas luxação patelar*

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## ***CLASSIFICAÇÃO DE Infecção em ATJ***

*Tipo 1- Intraoperatória*

*Tipo 2- infecção nos primeiros 2 meses*

*Tipo 3- infecção hematogenica aguda em prótese funcional previa*

*Tipo 4- infecção Crônica*

**Table 128-3** Classification System of Prosthetic Joint Infection: Time to Onset of Infection Dictates Treatment

	Type 1	Type 2	Type 3	Type 4
Timing of diagnosis	Positive intraoperative cultures	Early postoperative infection	Acute hematogenous infection	Late (chronic) infection
Definition	Two or more positive cultures at surgery	Infection occurs within first month after surgery	Hematogenous seeding of previously well-functioning arthroplasty	Chronic indolent clinical course; infection present for longer than 1 month
Treatment	Appropriate antibiotics	Attempt at débridement with prosthesis salvage	Attempt at débridement with prosthesis salvage or prosthesis removal	Prosthesis removal

From Segawa H, Tsukayama DT, Kyle RF, Becker DA, Gustilo RB: Infection after total knee arthroplasty: a retrospective study of the treatment of eighty-one infections. J Bone Joint Surg Am 81:1434-1445, 1999.

## ***CLASSIFICAÇÃO DE AORI - Anderson Orthopedic Research Intitute***

### AORI\* bone defect types

#### Type 1 defect

Intact metaphyseal bone

Good cancellous bone at or near a normal joint-line level

#### Type 2 defect

Damaged metaphyseal bone

Loss of cancellous bone that requires cement fill, augments, or small bone grafts to restore a reasonable joint-line level

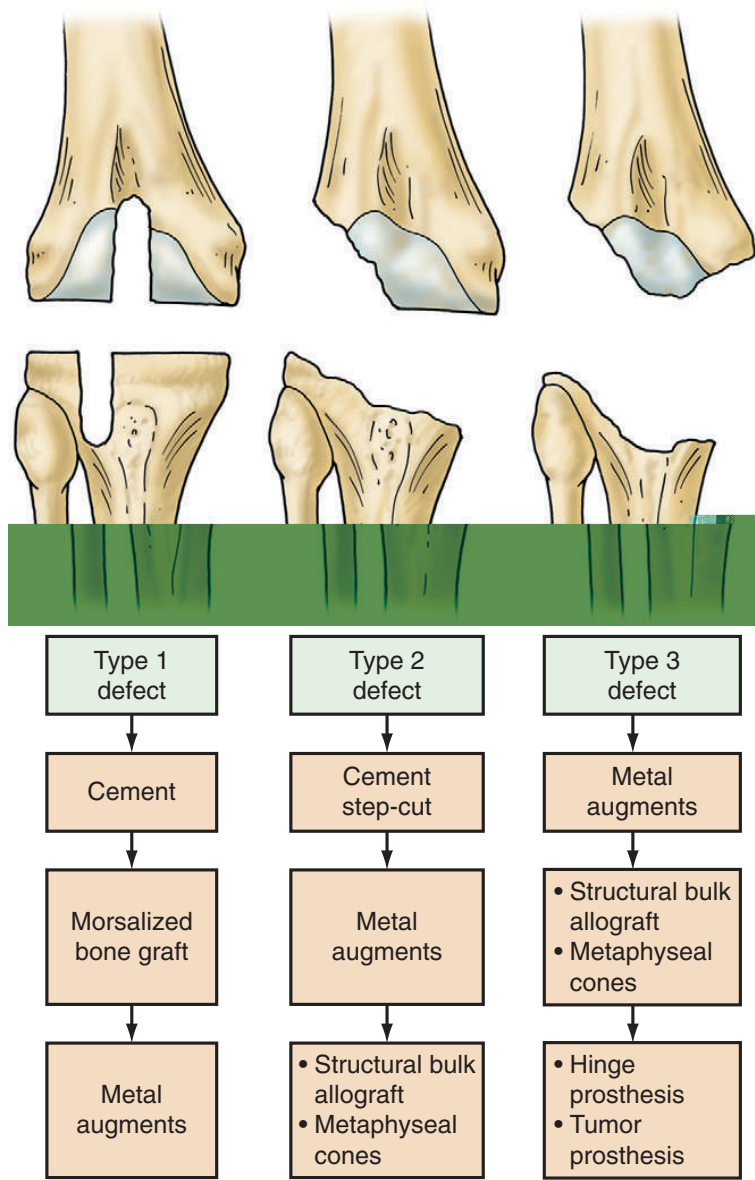
2A- one femoral or tibial condyle

2B- both femoral or tibial condyles

#### Type 3 defect

(Deficient metaphyseal bone)

Deficient bone that compromises a major portion of either condyle or plateau; these defects usually require a large structural allograft, a rotating hinged component, or custom component.



**Figure 127-21.** Managing bone loss in revision in total knee arthroplasty.

## *CLASSIFICAÇÃO DE ALBACK MODIFICADA POR*

<b>Classificação de Ahlbäck modificada por Keyes e Goodfellow<sup>(4,6)</sup></b>	
<b>Grau I</b>	Redução do espaço articular
<b>Grau II</b>	Obliteração do espaço articular
<b>Grau III</b>	AP - desgaste do platô tibial < 5 mm Perfil - parte posterior do platô intacta
<b>Grau IV</b>	AP - desgaste de 5 a 10 mm do platô tibial Perfil - extenso desgaste de margem posterior do platô tibial

### *GOODFELLOW*

### *GRAU V SUBLUXAÇÃO DA TIBIA MAIOR DE 10MM*

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## *CLASSIFICAÇÃO DE KELLGREN E LAWRENCE*

<b>Tabela 1 - Classificação de Kellgren e Lawrence</b>	
<b>Grau 0</b>	Normal
<b>Grau 1</b>	Estreitamento duvidoso do espaço articular e possíveis osteófitos
<b>Grau 2</b>	Possível estreitamento do espaço articular e osteófito definido
<b>Grau 3</b>	Estreitamento definido do espaço articular, múltiplos osteófitos moderados, alguma esclerose subcondral e possível deformidade do contorno ósseo
<b>Grau 4</b>	Estreitamento notável do espaço articular, esclerose subcondral grave, artrose deformante do contorno ósseo e presença de grandes osteófitos