

# Smart**Doc**

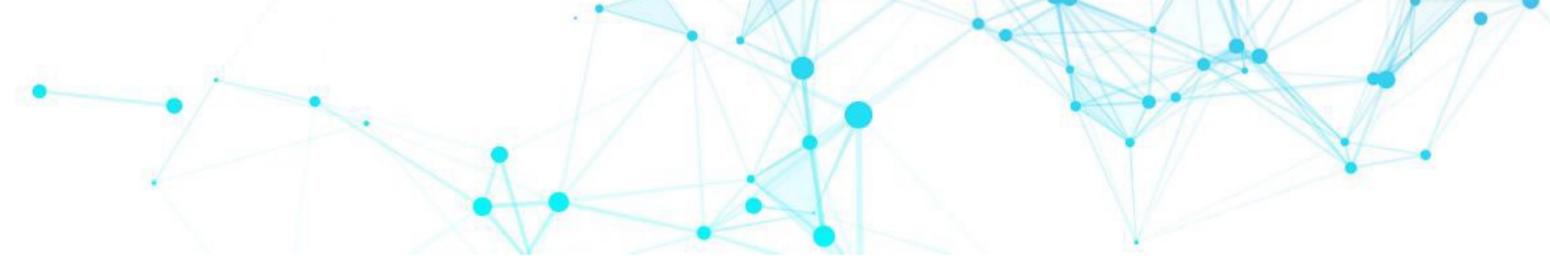
Propuesta





**Nueva Opción  
Terapéutica  
en Patologías  
Degenerativas  
Osteoarticulares**





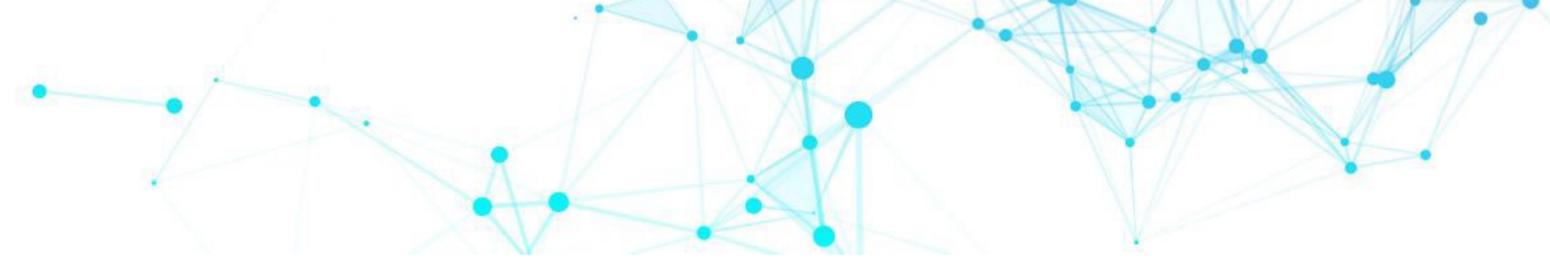
# Desafío

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Alta prevalencia  
osteoartritis  
(artrosis)

Lesiones recurrentes  
en deportistas  
(tendinitis, fracturas,  
etc)

Pacientes con  
contraindicación de  
cirugía y/o eventos  
adversos a fármacos  
(AINES, etc)



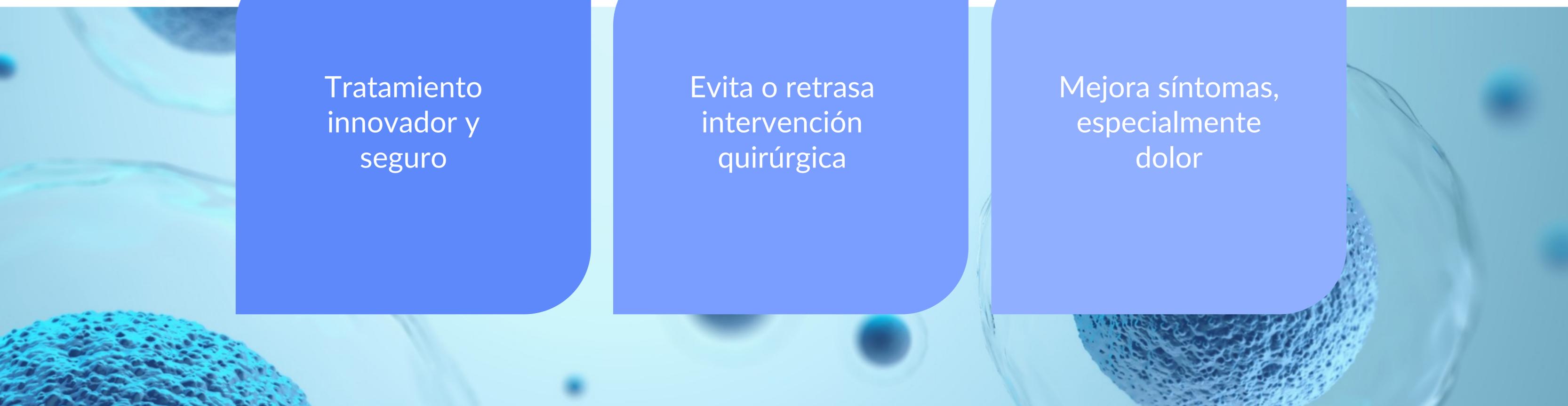
# Solución

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Tratamiento  
innovador y  
seguro

Evita o retrasa  
intervención  
quirúrgica

Mejora síntomas,  
especialmente  
dolor



Producto  
**Células Madre  
derivadas del  
Tejido Adiposo**

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## MEDICINA REGENERATIVA

- ✓ Nuevo campo de la medicina
- ✓ Terapia a partir de recursos biológicos autólogos o alogénicos
- ✓ Mínimamente invasiva
- ✓ Promueve cicatrización de huesos, cartílagos, tendones y ligamentos



# Células madre

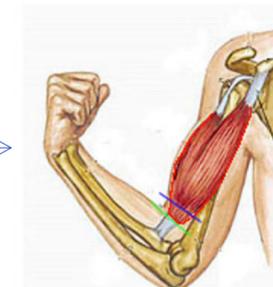
Células madre adultas

Células madre embrionaria

Células madre pluripotentes Inducidas (iPSC)

Células Mesenquimales derivadas de médula ósea

Células Mesenquimales derivadas de tejido adiposo





# Evidencia Relevante

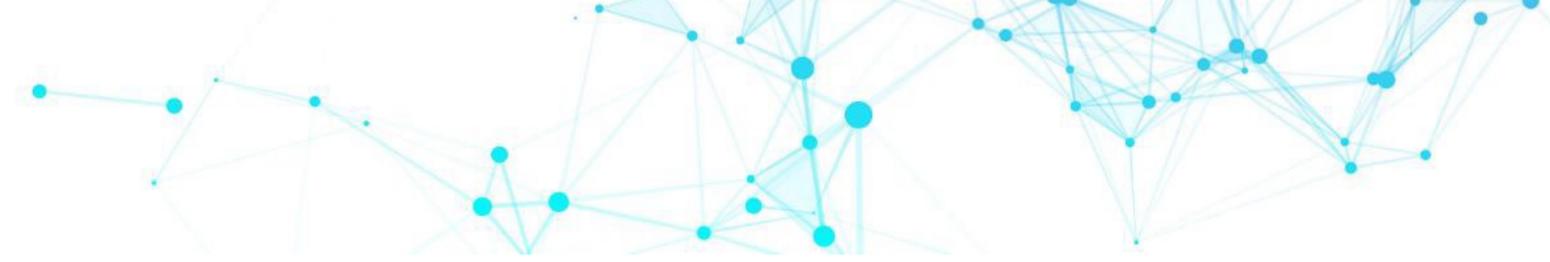
**Table 3** Evidence from human clinical studies for the use of ADSC

	Study design	Subjects	Location	Comparison	Results	Conclusion
<b>Tendinopathy</b>						
Usuelli et al. [93]	RCT	44	Achilles	ADSC + PRP vs. PRP alone	Early VAS pain, AOFAS, and VISA-A score benefits	PRP and SVF safe and effective; SVF may provide faster results
Striano et al. [94]	Case Series	18	Rotator Cuff	None	Improvements in National Pain Scale and American Shoulder and Elbow Surgeons Score (ASES)	Use of ADSCs resulted in significant improvements in pain, function and quality of life at 12 months
<b>Osteoarthritis</b>						
Pers et al. [95]	Case Series	18	Knee	None	Improvements in KOOS, SAS, WOMAC VAS Pain	ADSCs are safe and well tolerated in patients with knee osteoarthritis
Panchal et al. [96]	Case Series	17	Knee	None	Improvements in numerical pain rating scale, knee society score, and lower extremity activity scale	The injection of autologous, micro-fractured, minimally manipulated adipose tissue appears to be a safe and effective treatment option for patients with refractory, severe (grade 3 or 4) knee OA.
Cattaneo et al. [97]	Case Series	38	Knee	None	Improvements in KOOS and WOMAC scores	Micro-fragmented adipose tissue injection associated with arthroscopic procedures is a safe and beneficial adjunct for symptomatic knee OA
Dall'Oca et al. [98]	Case Series	6	Hip	None	Improvements in HHS and WOMAC scores	MSC Lipogems is a fairly easy technique and no adverse effects were observed. Preliminary results showed a positive outcome.
Hudetz et al. [99]	Case Series	17	Knee	None	Increases in contents of cartilage glycosaminoglycans; improved VAS pain scores; no differences in N-glycan or IgG synovial concentrations	The use of autologous and microfragmented adipose tissue in patients with knee OA (measured by dGEMRIC MRI) increased glycosaminoglycan (GAG) content in hyaline cartilage, which is in line with observed clinical results
Russo et al. [100]	Case Series	22	Knee	None	Improvements in KOOS Lysholm, VAS Pain, and IKDC scores	Autologous and micro-fragmented adipose tissue injection is an innovative and safe approach for the management of diffuse knee OA in the mid-term.
Panni et al. [101]	Case Series	52	Knee	None	Improvements in IKS and VAS pain scores	Injection of ADSCs during arthroscopic debridement increased clinical and functional scores in patients with early knee OA at a mid-term follow-up, especially those with higher pre-operative VAS scores.
Jo et al. 2014 [20]	Case Series	18	Knee	None	Improvement in WOMAC score; size of cartilage defect decrease; volume of cartilage increase; thick, hyaline-like cartilage regeneration.	ADSC improved function and pain of the knee joint without causing adverse events; reduced cartilage defects
Koh et al. 2013 [19]	Case Series	18	Knee	None	Improvement in WOMAC and Lysholm scores; decrease in VAS pain; improved cartilage whole-organ MRI score	ADSC effective and safe for improving function, reducing pain
Kim et al. 2015 [102]	Cohort	20	Knee	ADSC+PRP injection vs. ADSC implantation alone	Improved IKDC, Tegner scores in implantation group	



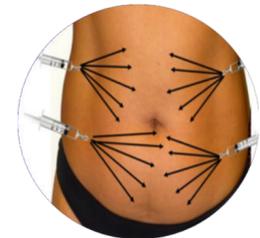
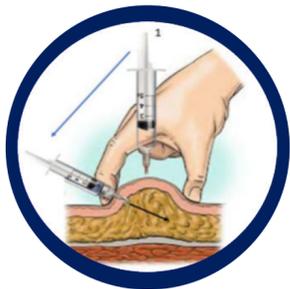
# Evidencia Relevante

	Study design	Subjects	Location	Comparison	Results	Conclusion
						ADSC implantation for knee OA resulted in better clinical and second-look arthroscopic outcomes than an ADSC injection.
OCD						
Kim et al. [18]	Case Series	55	Knee	None	Improved IKDC, Tegner scores	Encouraging clinical outcomes
Kim et al. [103]	Cohort	49	Talus	Marrow stimulation alone	Improved VAS pain, AOFAS, and Tegner, cartilage restoration	Encouraging results, even in setting of poor prognostic factors
Kim et al. [104]	Case Series	24	Knee	None	Improved IKDC, Tegner scores; improved cartilage lesion grade on MRI	ADSC useful for repairing cartilage lesions
Koh et al. [21]	RCT	80	Knee	Microfracture alone	Improved KOOS, cartilage signal intensity; 65% in ADSC group with complete cartilage coverage vs. 45% in control group	ADSC provided radiologic, KOOS pain and symptom subscore improvements; no differences in activity, sports, or quality-of-life
Freitag et al. [105]	Case Report	1	Knee	None	Improvement in NPRS pain score, Global WOMAC score, and all components of the KOOS; MRI showed complete filling of the chondral defect; modified ICRS score improved from Grade 3 to Grade 0.	The use of injection of autologous ADSCs following a traumatic chondral defect of the patella resulted in significant pain and functional improvements and complete regeneration of hyaline-like cartilage within the defect.
D'Ambrosi et al. [106]	Case Series	4	Talus	None	Improvements in the American Orthopedic Foot and Ankle Society score and VAS pain score; no complications.	Autologous microfractured, purified adipose tissue is safe and effective for osteochondral lesions of the talus.



# Procedimiento

Extracción de muestra por punción de grasa abdominal



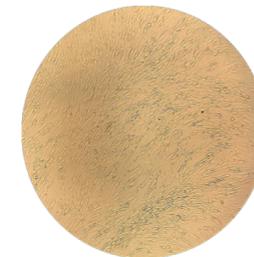
Muestra de grasa abdominal obtenida



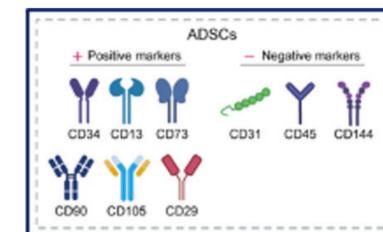
Procesado y cultivo primario de células madre/estromales



Confluencia Células Mesenquimales



Controles microbiológicos y biomarcadores



• Producto listo para administrar

• Trazable



4-6 Semanas





# Criterios de Recomendación

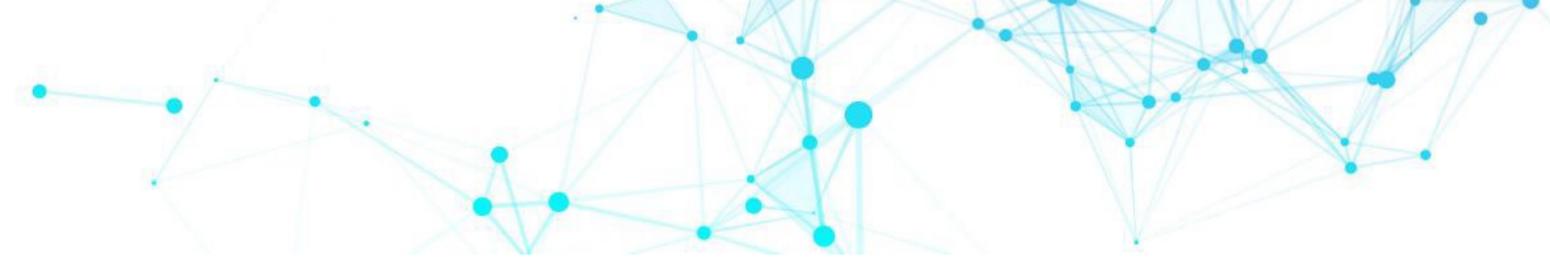
✓ **EDAD > 18 años**

## ✓ **Diagnóstico**

- Artrosis rodilla
- Artrosis cadera
- MMSS y Mano (manguito rotador, tendinopatías, rizartrrosis)
- Discopatía vertebral
- Fracturas no consolidadas

## ✓ **Status clínico**

- Dolor crónico
- EA relacionados a AINES
- Impotencia funcional
- Deseo de postergar cirugía (ej. Paciente joven)



# Criterios de Exclusión

## ✓ Absolutos

- Embarazo
- Enfermedad Oncológica activa

## ✓ Relativos

- Anticoagulación (evaluación previa con hematólogo de cabecera)



# Modalidad Operativa



# Profesionales



**Dr. Gonzalo Garate**

- ✓ Jefe del Servicio de Hematología del Hospital Alemán (Buenos Aires, Argentina)
- ✓ Especialista Certificado en Hematología (Sociedad Argentina de Hematología y Asociación Médica Argentina).
- ✓ Miembro titular de la Asociación Europea de Hematología (EHA).
- ✓ Fundador del laboratorio de coagulopatías del Hospital Alemán (Buenos Aires, Argentina)
- ✓ Visitor Fellowship en Hematología, University of California (San Diego, EE.UU.)



**Dr. Roger Torgaspack**

- ✓ Jefe de Departamento de Cirugía del Centro de Estudios Médicos e Investigaciones Clínicas (CEMIC).
- ✓ Director Médico del Instituto Penta de Bs As.
- ✓ Posgrado en Ortopedia y Traumatología, Universidad de Niza (Francia)
- ✓ Posgrado en Cirugía de cadera y rodilla, Universidad Luis Pasteur (Francia)
- ✓ Fellowship en Trauma Ortopédico, Baylor College of Medicine (Houston, EEUU)
- ✓ Fellowship en Ortopedia del Deporte, Wayne State University (Detroit, EEUU.)
- ✓ Fellowship en Cirugía reconstructiva, NYU-Hospital for Joint Diseases (New York, EEUU)



# Modalidad Operativa

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- ✓ Recibirán un mail con usuario y contraseña para entrar a nuestra plataforma
- ✓ Iniciar sesión con usuario y contraseña
- ✓ Completar campos con datos del paciente a evaluar por BIOMADE
- ✓ Aceptar términos y condiciones (check)



# Información Importante

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- ✓ Procedimiento de alto precio
- ✓ Sin cobertura por parte de los financiadores
- ✓ Honorarios profesionales a médicos de la Red
  - Por procedimiento realizado
  - Se abonarán a mes vencido, dentro de los 15 días de reciba la factura
  - En la misma moneda que haya pagado el paciente
- ✓ Comunicar al paciente que deberá concurrir a la consulta con las imágenes impresas y el informe, o bien, el link para acceder a los estudios

## Sumate a SmartDoc y postulá tu caso

¡Hola << Nombre >>!

En esta oportunidad, queremos invitarte a ser parte de SmartDoc para recompensarte con los beneficios de la plataforma y para que puedas postular tu caso.

Te enviamos los datos de acceso, para que realices tu LOGIN de forma sencilla, rápida y segura:

**USUARIO**

<< Tu Email >>

**CONTRASEÑA**

\*\*\*\*\*

**INGRESÁ Y LOGUEATE AHORA**



Dr. Germán de la Llave | MAT. 90.017

SmartDoc

+54 911 5964 0077

german.delallave@smartdoc.com.ar



SmartDoc /

# Bienvenido

Hola Juan, desde aquí podrás ingresar tu caso para ser evaluado.



Descargá la presentación realizada durante las recientes reuniones virtuales

Descargar

## Postulá tu caso

### DATOS DEL MÉDICO DIFUSOR

**Nombre:** Juan

**Apellido:** Quiroga

**Email:** email@email.com

Matrícula Profesional\*

### DATOS DEL PACIENTE

Nombre\*

Apellido\*

DNI\*

dd/mm/aaaa

Tel. Celular\*

Tel. Alternativo\*

Email\*

Acepto los [términos y condiciones](#)

Enviar