

# Colecistostomía percutánea: técnica y resultados

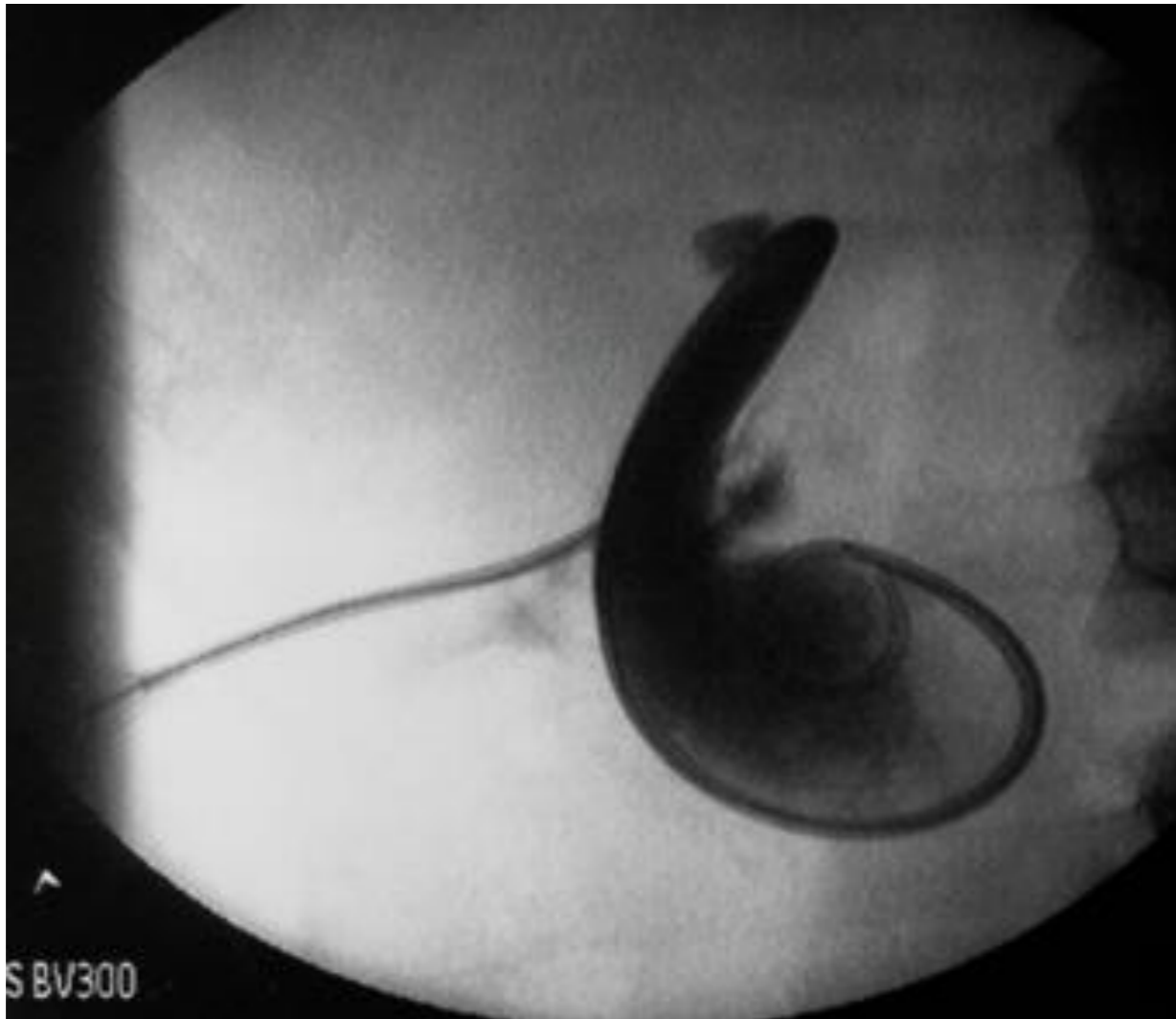


Prof. Méd. Gustavo Stork  
Cirugía Hepatobiliopancreática

**Hospital Municipal de Agudos “Dr. Leónidas Lucero” -HMALL-  
UNIVERSIDAD NACIONAL DEL SUR -UNS-  
Bahía Blanca**



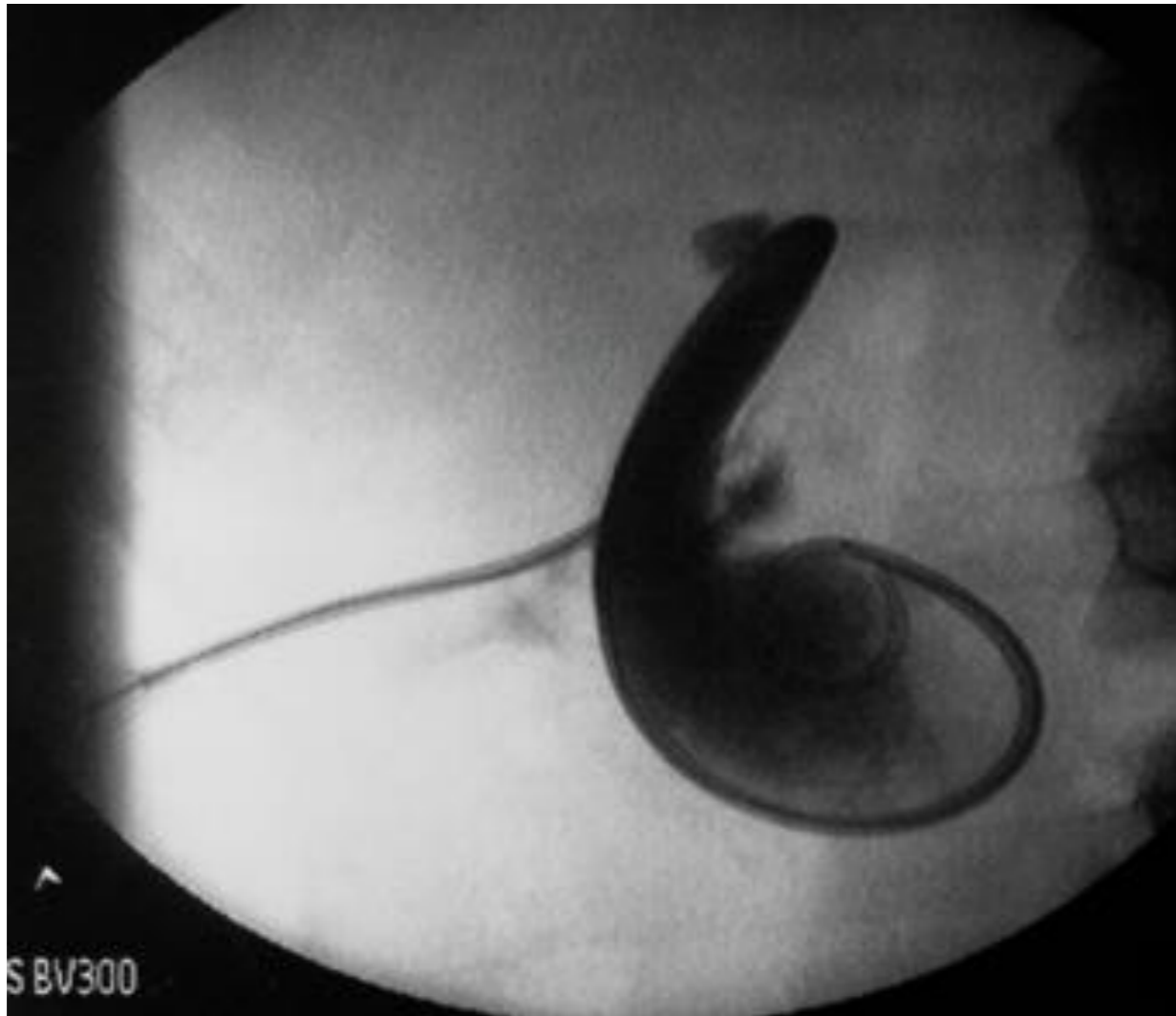
# Definición:



**Abocamiento indirecto de la vesícula biliar al exterior, por medio de un catéter colocado a través de la piel**



# Motivo:



**Pacientes con colecistitis aguda, que por distintas razones no se aconseja o no se puede realizar la colecistectomía**



# Indicaciones clásicas

1. Pacientes críticos (litiásica o alitiásica)
2. Pacientes de alto riesgo quirúrgico (litiásica)
3. Otras: colecistitis aguda post CPRE o CTPH, en embarazo, obstrucciones oncológicas, etc.



## Diagnostic criteria and severity assessment of acute cholecystitis: Tokyo Guidelines

### Table 3. Criteria for mild (grade I) acute cholecystitis

“Mild (grade I)” acute cholecystitis does not meet the criteria of “severe (grade III)” or “moderate (grade II)” acute cholecystitis. Grade I can also be defined as acute cholecystitis in a healthy patient with no organ dysfunction and only mild inflammatory changes in the gallbladder, making cholecystectomy a safe and low-risk operative procedure.

### Table 4. Criteria for moderate (grade II) acute cholecystitis

“Moderate” acute cholecystitis is accompanied by any one of the following conditions:

1. Elevated WBC count ( $>18000/\text{mm}^3$ )
2. Palpable tender mass in the right upper abdominal quadrant
3. Duration of complaints  $>72\text{h}^a$
4. Marked local inflammation (biliary peritonitis, pericholecystic abscess, hepatic abscess, gangrenous cholecystitis, emphysematous cholecystitis)

<sup>a</sup>Laparoscopic surgery in acute cholecystitis should be performed within 96 h after the onset (level 2b-4)<sup>13,14,16</sup>

### Table 5. Criteria for severe (grade III) acute cholecystitis

“Severe” acute cholecystitis is accompanied by dysfunctions in any one of the following organs/systems

1. Cardiovascular dysfunction (hypotension requiring treatment with dopamine  $\geq 5\mu\text{g}/\text{kg}$  per min, or any dose of dobutamine)
2. Neurological dysfunction (decreased level of consciousness)
3. Respiratory dysfunction ( $\text{PaO}_2/\text{FiO}_2$  ratio  $<300$ )
4. Renal dysfunction (oliguria, creatinine  $>2.0\text{mg}/\text{dl}$ )
5. Hepatic dysfunction (PT-INR  $>1.5$ )
6. Hematological dysfunction (platelet count  $<100000/\text{mm}^3$ )



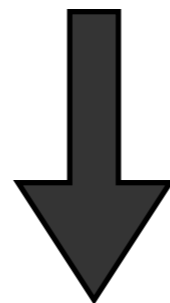
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If a patient has serious local **inflammation making early cholecystectomy difficult**, then percutaneous or operative drainage of the gallbladder is recommended.

**Proceso Inflamatorio Local!!**

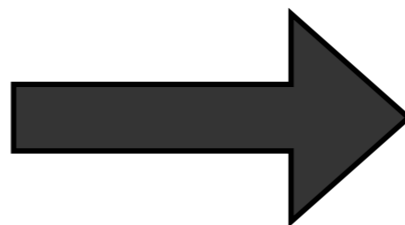


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5. Hepatic dysfunction (PT-INR  $> 1.5$ )
6. Hematological dysfunction (platelet count  $< 100,000/\text{mm}^3$ )



Elective cholecystectomy may be performed after improvement of the **acute illness** by gallbladder drainage.

Enfermedad Grave  
(Críticos o Alto Riesgo)

**Componente Sistémico!!**

### Pacientes críticos



Quemados  
Traumatizados  
Oncológicos  
Séptico

### Pacientes de elevado riesgo quirúrgico (ASA III/IV)



Cardiológica  
Respiratorias  
Renales  
DBT  
IRC



## Diagnostic criteria and severity assessment of acute cholecystitis: Tokyo Guidelines

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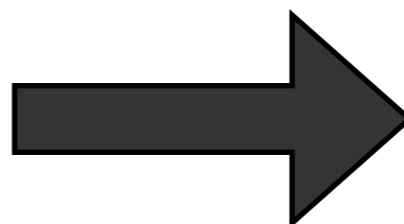
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**Proceso Inflamatorio Local!!**

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**Enfermedad Grave  
(Críticos o Alto Riesgo)**

**Componente Sistémico!!**



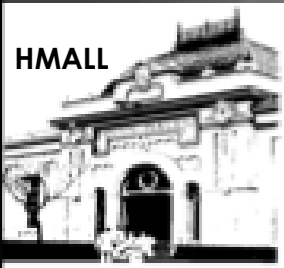


# Indicaciones actuales

**Proceso inflamatorio local  
“Dificultad técnica”**

**Pacientes críticos o de alto riesgo:  
“Intolerancia a la anestesia”**

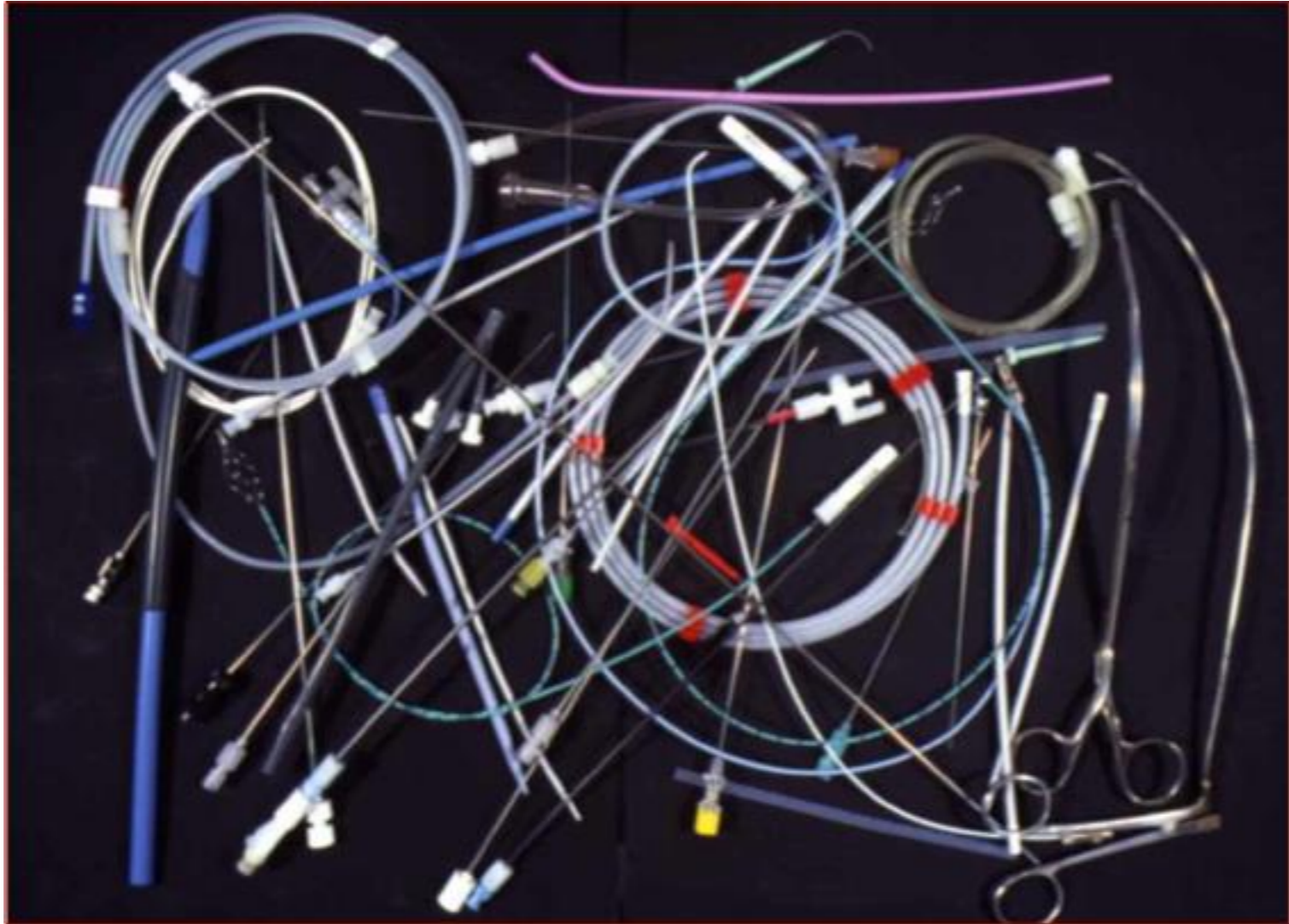
- . Miniinvasivo
- . Sedación
- . Realizable en UTI
- . Técnicamente sencillo y reproducible
- . Efectividad >95%
- . Baja morbilidad y mortalidad



# Aspectos técnicos



# Instrumental



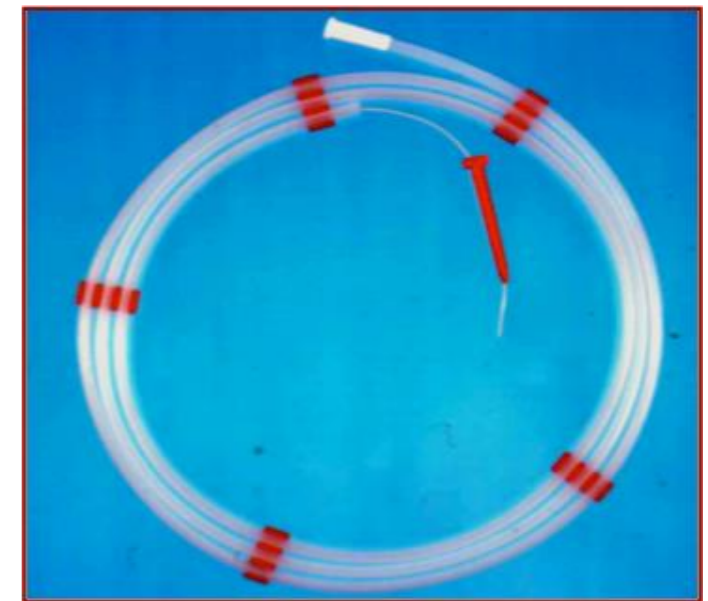


# Instrumental

Aguja Chiba de 18G



Alambre guía Amplatz de 0.035-38I



Catéter multipropósito de 8.5FR





# Guía



## 1. Ecográfica c/s Rx



## 2. Tomográfica c/s Rx





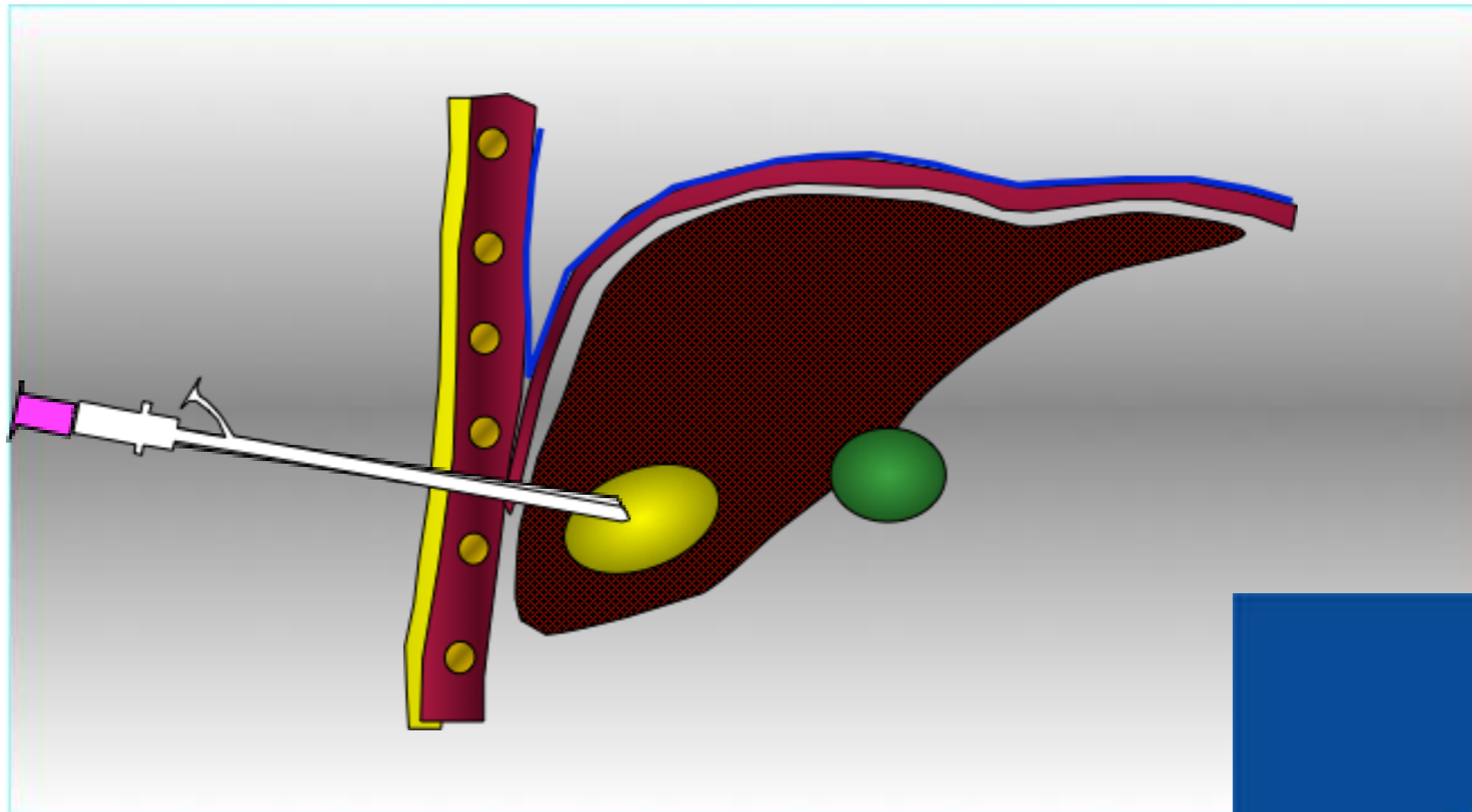
# Técnicas

1. Trocar
2. Seldinger
3. Outras



# Técnicas

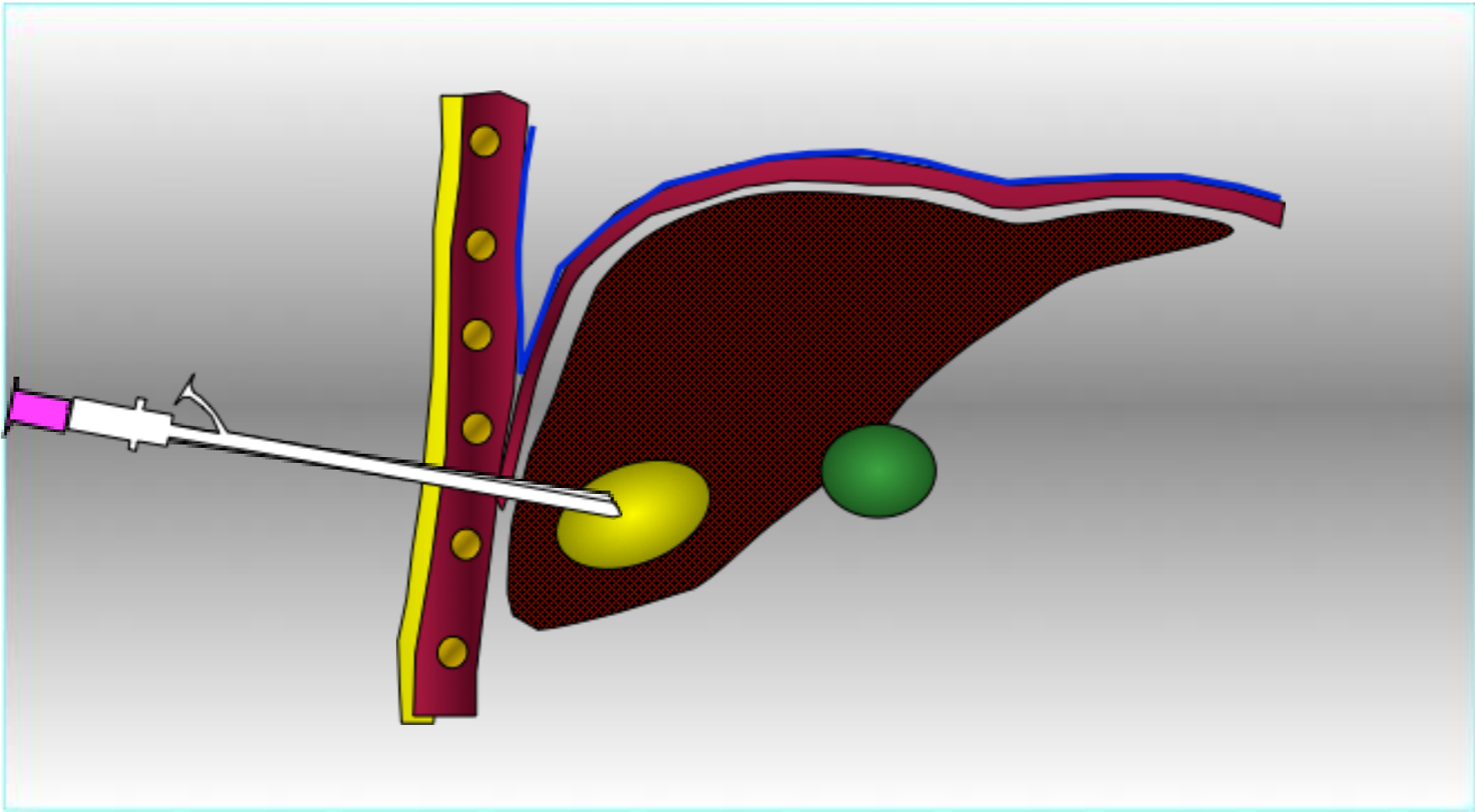
## 1. Trocar





# Técnicas

## 1. Trocar

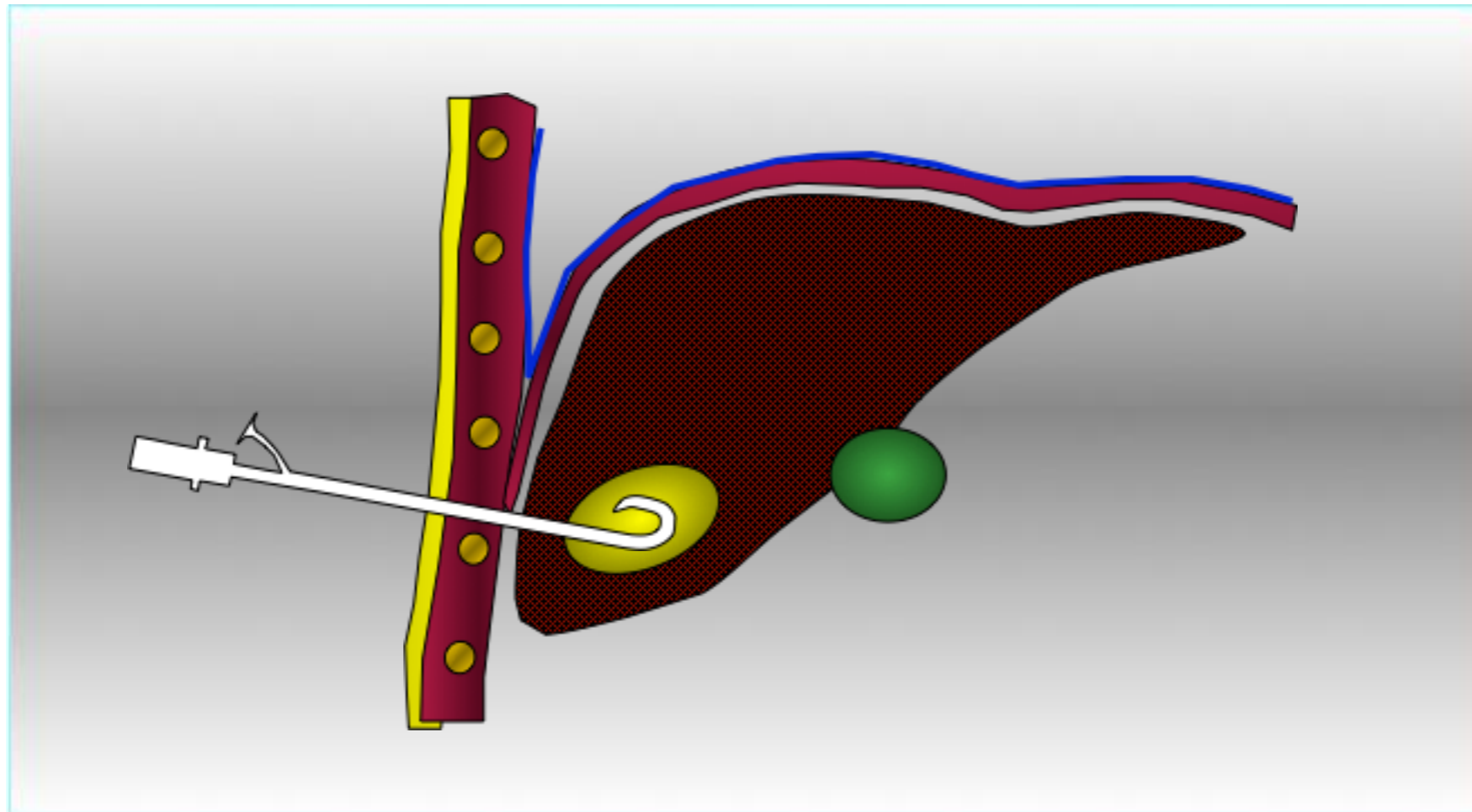






# Técnicas

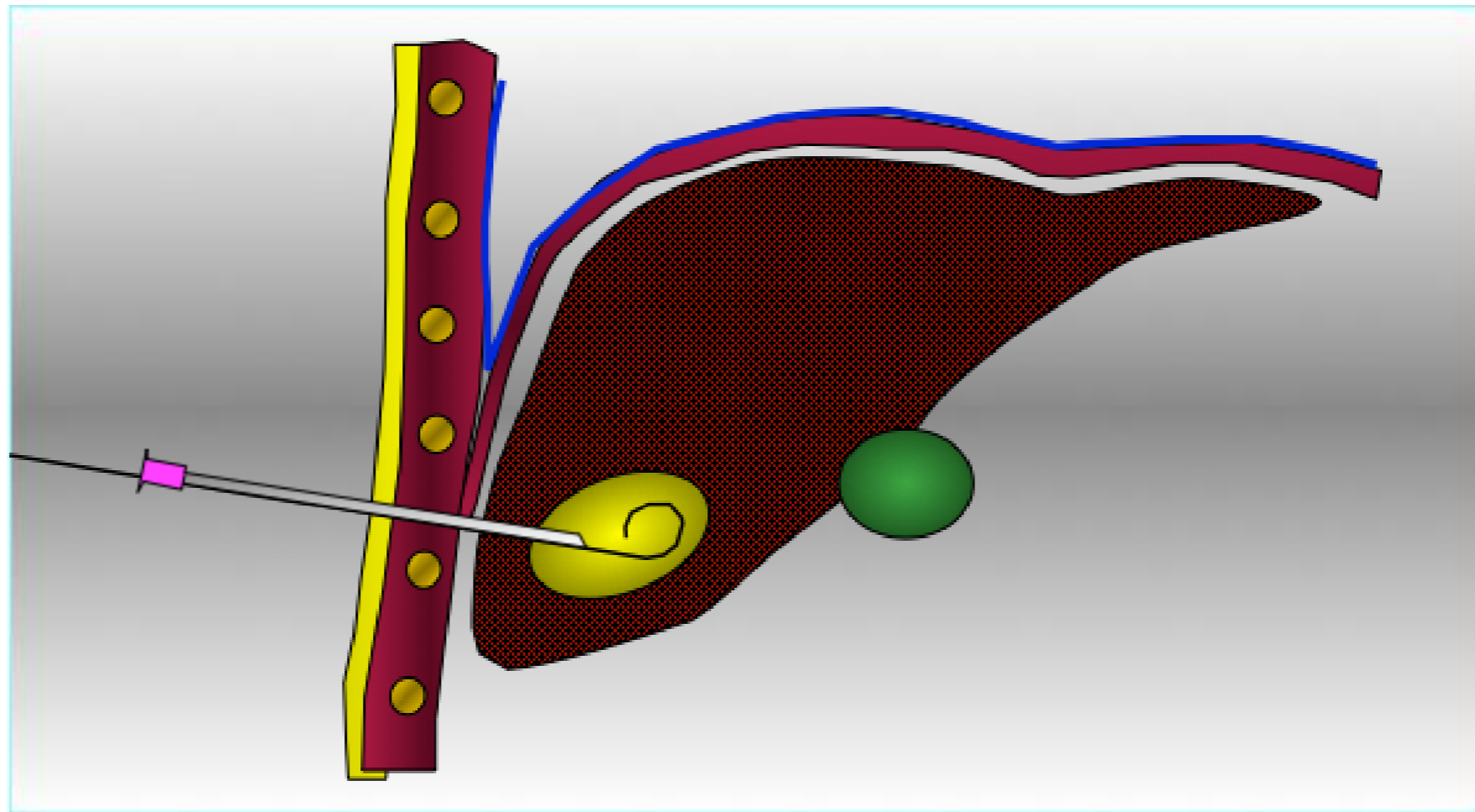
## 1. Trocar





# Técnicas

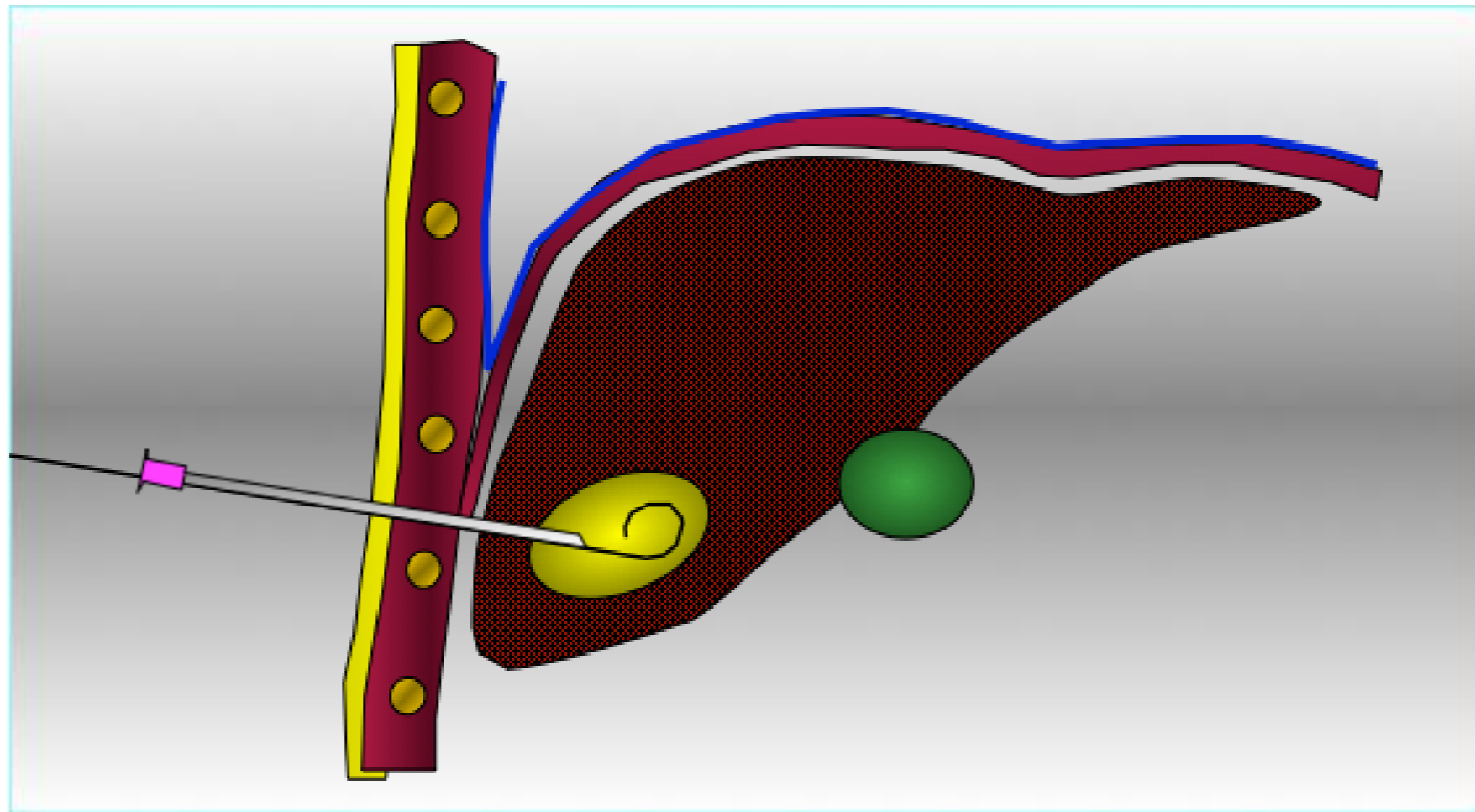
## Seldinger





# Técnicas

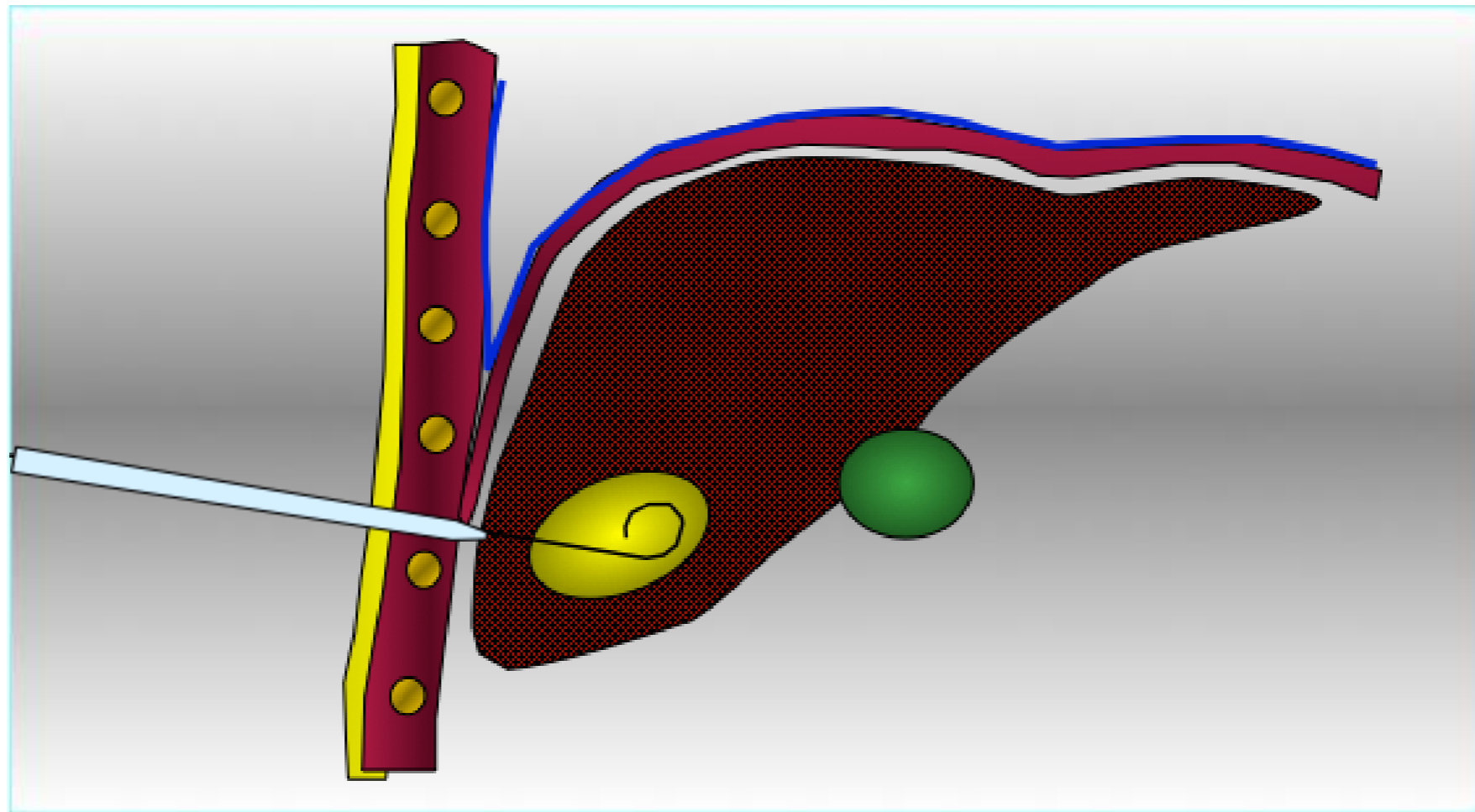
## Seldinger





# Técnicas

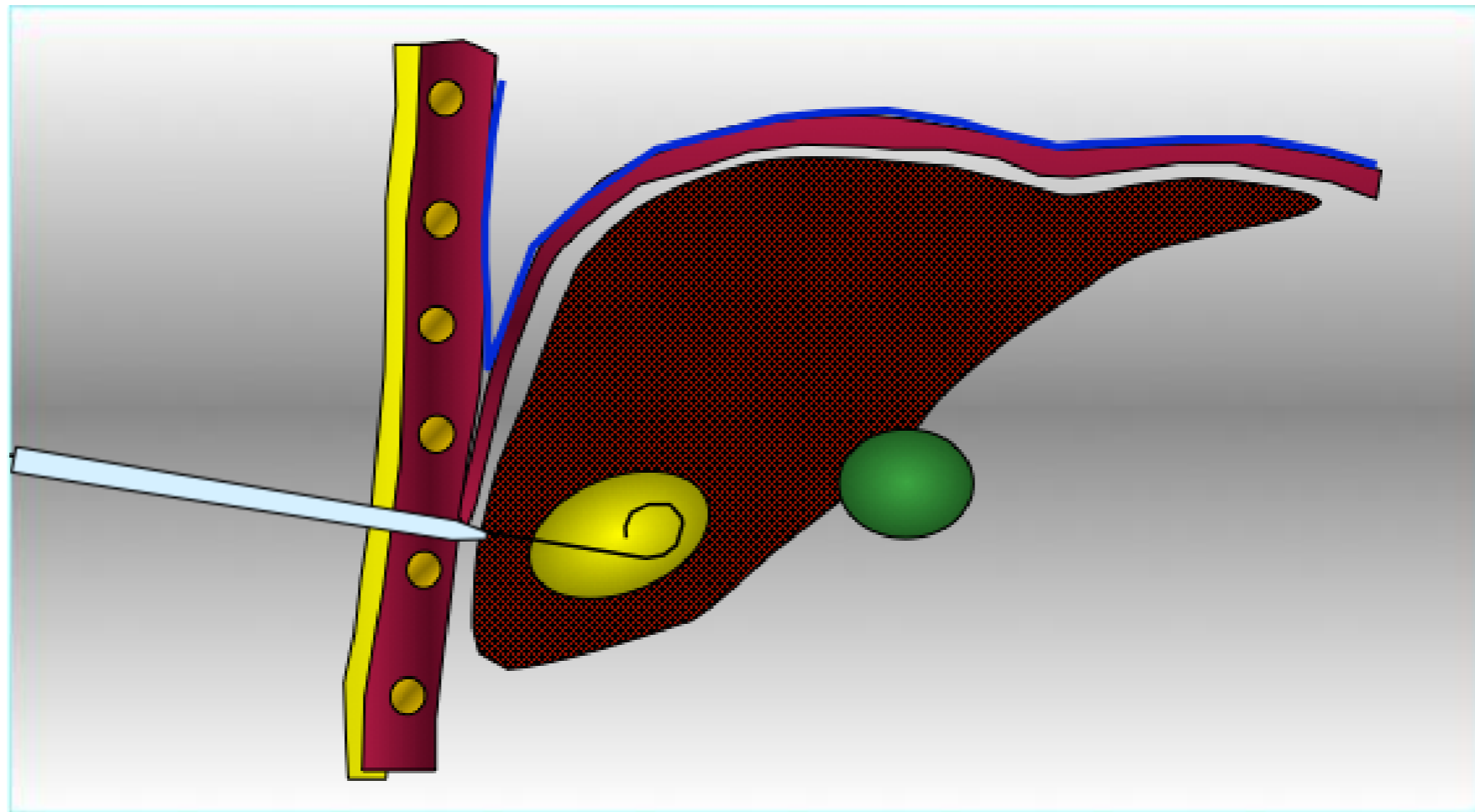
## Seldinger





# Técnicas

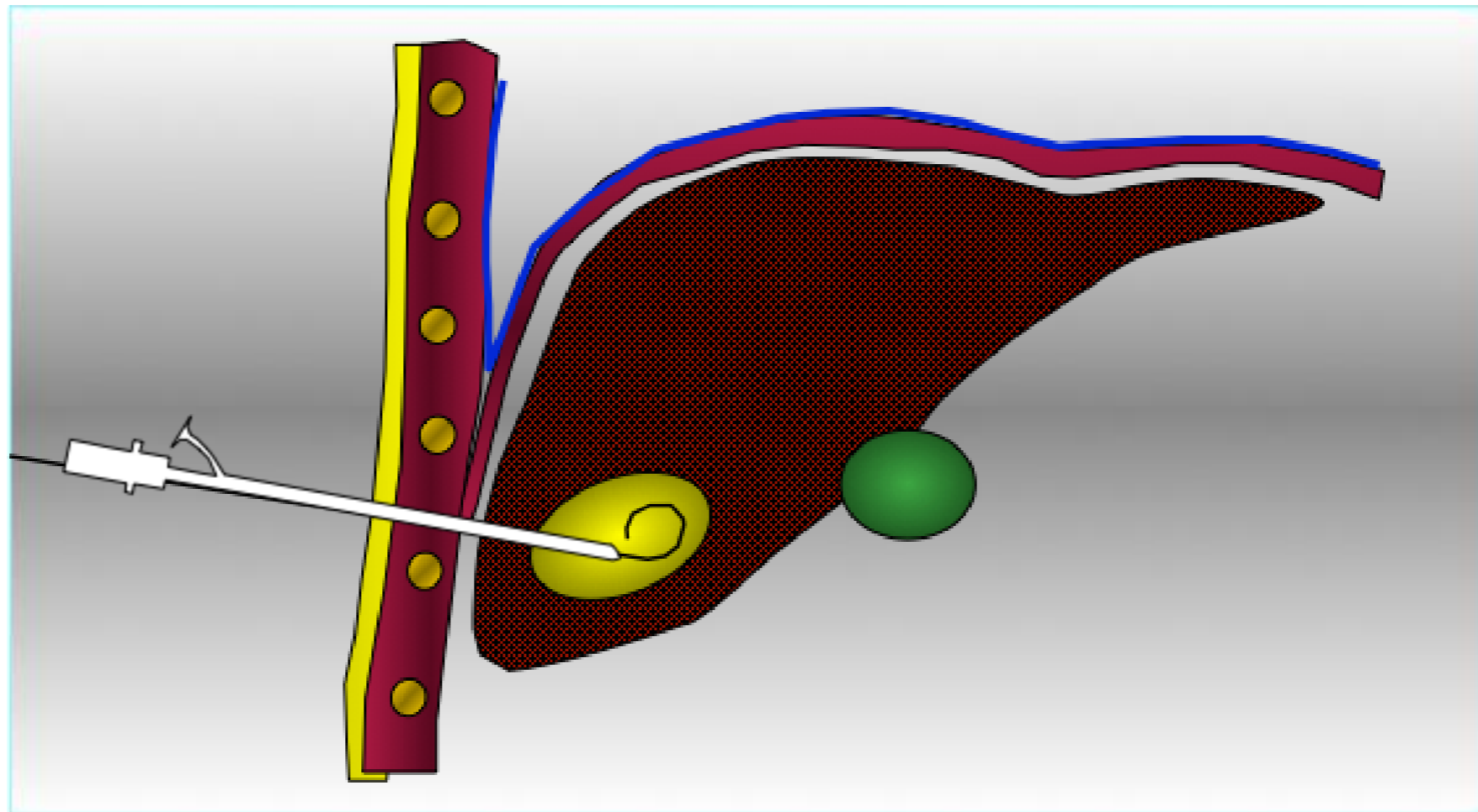
## Seldinger





# Técnicas

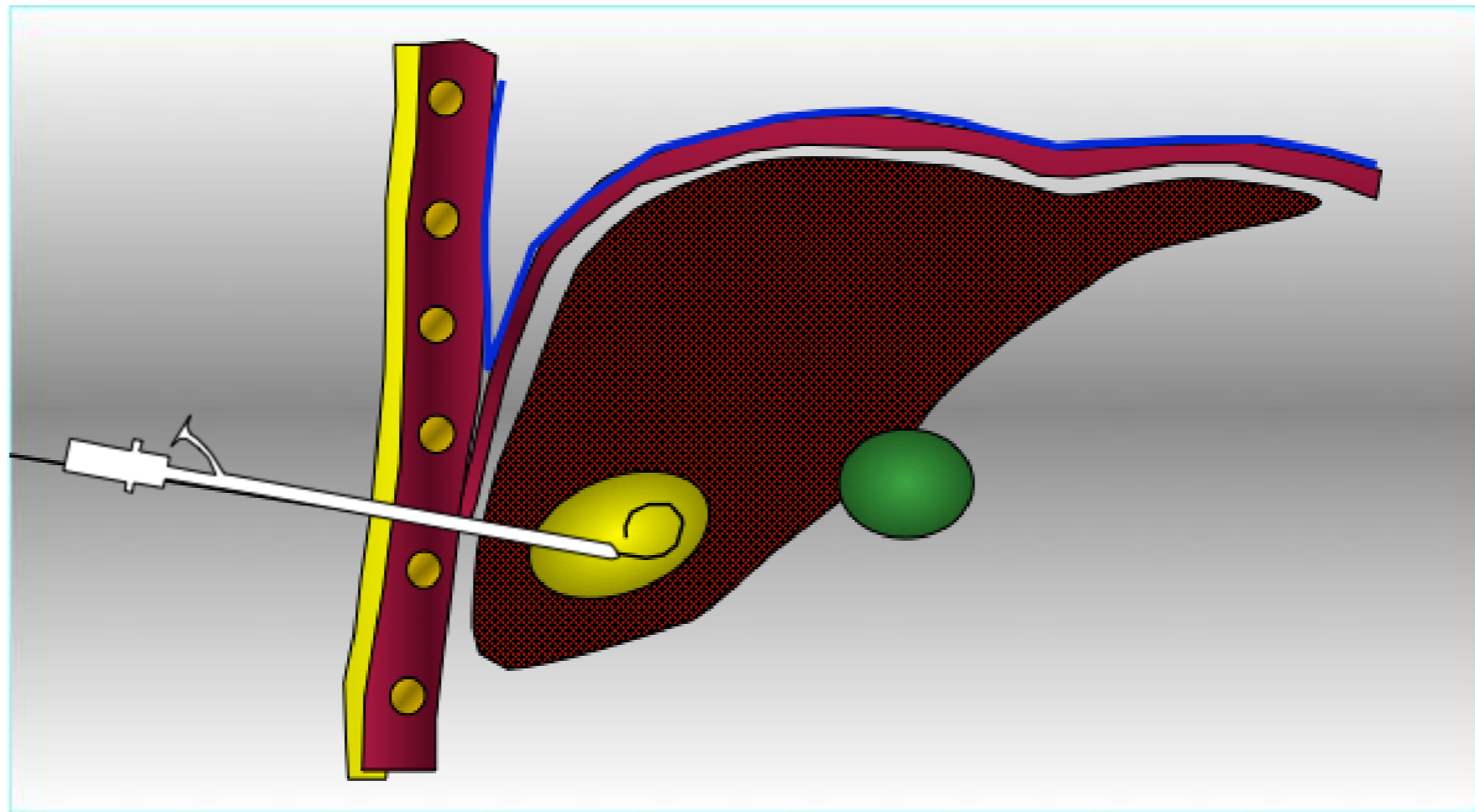
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# Técnicas

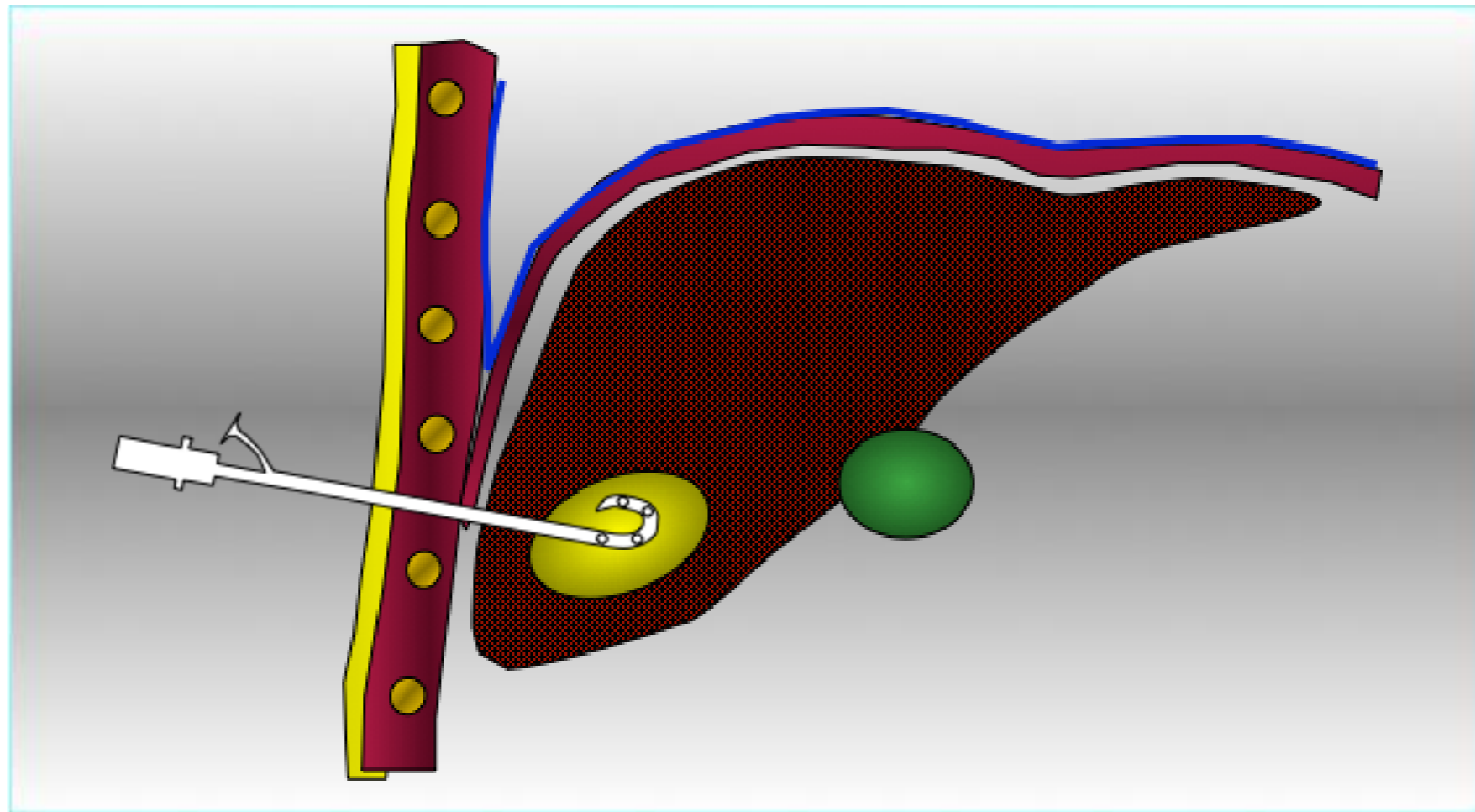
## Seldinger





# Técnicas

## Seldinger







## Vía de acceso

**Transhepática:** ingresa a la vesícula, atravesando el parénquima hepático

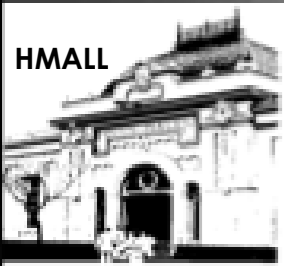
**Transperitoneal:** ingresa a la vesícula, atravesando peritoneo y epiplón que bloquea el proceso inflamatorio



Hepatogastroenterology. 2010 Jan-Feb;57(97):12-7.

J Vasc Interv Radiol. 1991 Nov;2(4):543-7.

Radiology. 1988 Sep;168(3):615-6.



# Resumen técnico

1. Guía ecográfica y Rx
2. Acceso transhepático
3. Instrumental:
  - . aguja 18G,
  - . alambre Amplatz 0.035I
  - . catéter 8.5Fr (no dilatar)
4. Técnica de Seldinger



# Resultados

1. Como nos va con el método?
2. Que debemos hacer luego con la vesícula?

2a. Debemos hacer CVL siempre luego de la colecistostomía?

2b. En que momento?



# Resultados

## 1. Como nos va con la colecistostomía percutánea

- a. 98-100% éxito del procedimiento
- b. 85-95% de éxito inicial para resolver la colecistitis
- c. 5-15% morbilidad
- d. <1% letalidad
- d. 12.3-30% MORTALIDAD GLOBAL.

<b>Autores</b>	<b>Año</b>	<b>Éxito</b>	<b>Morbilidad</b>	<b>Mortalidad</b>	<b>Seguimiento Mortalidad</b>
Giménez et al	1994	95%	8%	0%	21%
Pekolj et al	1997	95%	13%	0%	20%
Álvarez Rodríguez et al	2008	95.8%	10%	0%	23%
Moro/Stork et al	2008	95%	11.7%	0%	21.5%



# Resultados

2a. Debemos hacer CVL siempre luego de la colecistostomía?

Colecistitis Acalculosa

Solo el 7% del los pacientes que sobrevivieron, y que habían recibido colecistostomía percutánea, hacen un nuevo episodio de colecistitis.

## CONCLUSION:

Percutaneous cholecystostomy is an effective procedure and a good alternative for patients unfit to undergo immediate surgery because of severe sepsis or an underlying comorbidity. After patients with AAC have recovered from percutaneous cholecystostomy, further treatment such as cholecystectomy **might not be needed**.

[J Clin Gastroenterol.](#) 2012 Mar;46(3):216-9.

Can percutaneous cholecystostomy be a definitive management for acute acalculous cholecystitis?

[Chung YH, Choi ER, Kim KM,](#) Kim MJ, Lee JK, Lee KT, Lee KH, Choo SW, Do YS, Choo IW.

Department of Medicine, Sungkyunkwan [University](#) School of [Medicine](#), Irwon-dong, Gangnam-gu, Republic of Korea.



# Resultados

**2a. Debemos hacer CVL siempre luego de la colecistostomía?**

**Colecistitis  
Litiásica**

[Br J Surg.](#) 2012 Sep;99(9):1254-61. doi: 10.1002/bjs.8836. Epub 2012 Jul 24.

Non-operative management of acute cholecystitis in the elderly.

[Department of Surgery, Yale University School of Medicine, New Haven, Connecticut 06520, USA.](#)

**Despite selection of the best elderly candidates for cholecystectomy, postoperative morbidity was significant. Medical management, with interval cholecystectomy only for recurrent AC, may be appropriate in selected patients.**

**HACER CVL SOLO EN CASOS DE RECURRENCIA DE LA COLECISTITIS Y EN PACIENTES SELECCIONADOS**



# Resultados

**2a. Debemos hacer CVL siempre luego de la colecistostomía?**

**Colecistitis  
Litiásica**

**ESTUDIARON LOS RESULTADOS A CORTO Y LAGO PLAZO LUEGO DE LA COLECISTOSTOMIA: “HACER O NO CVL POST COLECISTOSTOMIA”**

[Hepatogastroenterology](#). 2008 Sep-Oct;55(86-87):1497-502.

[Surg Endosc](#). 2012 May;26(5):1343-51. Epub 2011 Nov 17.

**10-25% se hicieron la colecistectomía**

**50% no se operaron, y de estos el 40% recayó en sus síntomas**

**RECOMIENDA LA CVL POST COLECISTOSTOMIA UNA VEZ QUE EL PACIENTE ESTE EN  
CONDICIONES**



# Resultados

**2a. Debemos hacer CVL siempre luego de la colecistostomía?**

**Colecistitis  
Litiásica**

## **COLECISTECTOMÍA LAPAROSCÓPICA EN PACIENTES CON COLECISTOSTOMÍA PERCUTÁNEA PREVIA**

*Dres. Juan Pekolj MAAC FACS, Alfredo Domenech Mercado, Lucas Mc Cormack MAAC,  
Oscar Mazza MAAC, Jorge A. Sívori MAAC FACS y Eduardo de Santibañes MAAC FACS*

**DEL SECTOR DE CIRUGÍA HEPATO BILIO PANCREÁTICA, SERVICIO DE CIRUGÍA GENERAL.  
HOSPITAL ITALIANO DE BUENOS AIRES**

**1989 -1997**

**93 CP todas en pac. por alto riesgo**

**CVL 18 (19.3%)**

**(16 litiásica y 2 alitiásica)**

**Tiempo promedio 77 (r:4-228)**





# Resultados

**2a. Debemos hacer CVL siempre luego de la colecistostomía?**

**Colecistitis  
Litiásica**

Dr. Moro Mariano - Dr. Stork Gustavo 2003-2008 (no publicado)

51 Colecistostomías Percutánea

**Litiásica: 42 (82%)**

Alitiásica: 9 (18%)

13 CVL **(31%)**

**Tiempo promedio 12 semanas**



# Resultados

Hay que realizar siempre la CVL post colecistostomía percutánea

**Colecistitis aguda  
alitásica**



**Nunca**

**Colecistitis aguda  
litásica**



**Grado III  
alto riesgo o  
crítico de UTI**



**A veces**

**Grado II  
por proceso  
inflamatorio**



**Siempre**

**Cuando?**



# Resultados

**2b. En que momento hacer la CVL:  
CUANDO?**

**Colecistitis  
Litiásica**

L  
E  
V  
E  
L  
  
IV

Vancouver, Canada

Surg Endosc. 1996 Dec;10(12):1185-8.

Pacientes de alto riesgo, con CVL a 8-12 semanas.

Ohio, USA

Arch Surg. 2000 Mar;135(3):341-6.

Pacientes con alto riesgo y GRADO II (proceso inflamatorio) CVL a 12 semanas.

Israel

Int J Surg. 2006;4(2):101-5. Epub 2006 Feb 10.

A toda colecistitis tratamiento médico.

Los que no respondieron Colecistostomía con CVL electiva alejada (8-12 semanas)



# Resultados

**2b. En que momento hacer la CVL:  
CUANDO?**

**Colecistitis  
Litiásica**

Surg Endosc. 2002 Dec;16(12):1704-7.

Early scheduled laparoscopic cholecystectomy following percutaneous transhepatic gallbladder drainage for patients with acute cholecystitis.

Chikamori F, Kuniyoshi N, Shibuya S, Takase Y.  
Department of Surgery, Kuniyoshi Hospital, Kochi, Japan.

L  
E  
V  
E  
L  
III

**Grupo I:** 31 patients were treated by **early scheduled LC following PTGBD**

**Grupo II:** 9 patients treated by **early LC without PTGBD**

**Grupo III:** 12 patients treated by **delayed LC following conservative therapy**

## CONCLUSION:

Early scheduled LC following PTGBD is a safe and effective therapeutic option for patients with acute cholecystitis especially in elderly and complicated patients.



# Resultados

2b. En que momento hacer la CVL:  
CUANDO?

Colecistitis  
Litiásica

[Surg Laparosc Endosc Percutan Tech.](#) 2005 Dec;15(6):315-20.

L  
E  
V  
E  
L

III

COMPARO COLECISTOTOMIA SEGUIDA DE CVL PRECOZ VS. TRATAMIENTO MEDICO Y  
CVL A LOS 30 DÍAS

[Management of acute calculous cholecystitis in high-risk patients: percutaneous cholecystotomy followed by early laparoscopic cholecystectomy.](#)

Akyürek N, Salman B, Yüksel O, Tezcaner T, Irkörüçü O, Yücel C, Oktar S, Tatlıcioğlu E.

Hepato-Pancreato-Biliary Surgery Unit, Department of [General Surgery](#), Gazi [University Medical School](#), Ankara, [Turkey](#).

The hospital [stay was](#) shorter and [cost was](#) in the [PCLC group](#) was [lower than in the](#) DLC group. PC allows resolution of sepsis in patients at high surgical risk. [Early LC could be safely performed once sepsis and acute infection resolved in these patients.](#)

CONCLUYE QUE LA ESTADIA HOSPITALARIA Y LOS COSTOS FUERON  
MEJORES EN COLECISTOSTOMIA MAS CVL PRECOZ



# Resultados

2b. En que momento hacer la CVL:  
CUANDO?

Colecistitis  
Litiásica

Surgical Laparoscopy, Endoscopy & Percutaneous Techniques.

February 2009 - Volume 19 - Issue 1 - pp 20-24

L  
E  
V  
E  
L

III

**Impact of Delayed Laparoscopic Cholecystectomy After Percutaneous Transhepatic Gallbladder Drainage for Patients With Complicated Acute Cholecystitis**

Kim, Hyung Ook MD; Ho Son, Byung MD; Yoo, Chang Hak MD; Ho Shin, Jun MD

**Patients were classified into 3 groups:**

**Grupo 1:** (n=60) patients who underwent an LC without preoperative PTGBD

**Grupo 2:** (n=35) patients who underwent an early scheduled LC within 7 days of PTGBD

**Grupo 3:** (n=38) patients in whom the LC was delayed for a mean of 19.9 days (range, 14 to 39 d) after PTGBD.

The conversion rate to open cholecystectomy and the postoperative complication rate were lower in group 3 than in group 1 (P<0.05).  
CVL POST COLECISTOSTOMIA



# Resultados

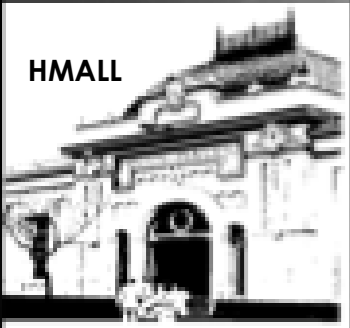
En que momento realizar la  
CVL?

Colecistitis aguda  
GRADO II  
Proceso Inflamatorio

8-12 Semanas  
(Level IV)

Colecistitis aguda  
Alto riesgo y críticos

Precoz ?  
(Level III-IV)



**“Muchas Gracias”**