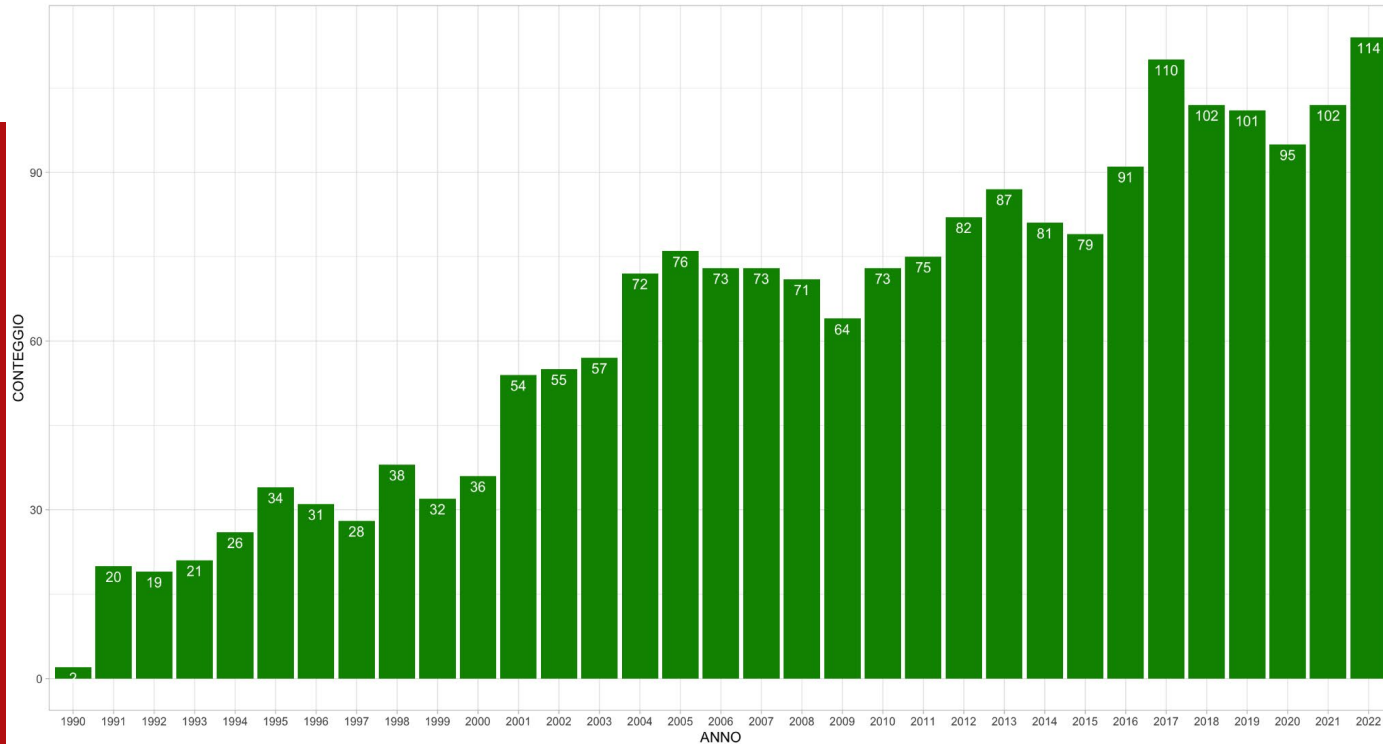




**Infezioni “difficult to treat”: esperienze di real life  
TRAPIANTO DI FEGATO**

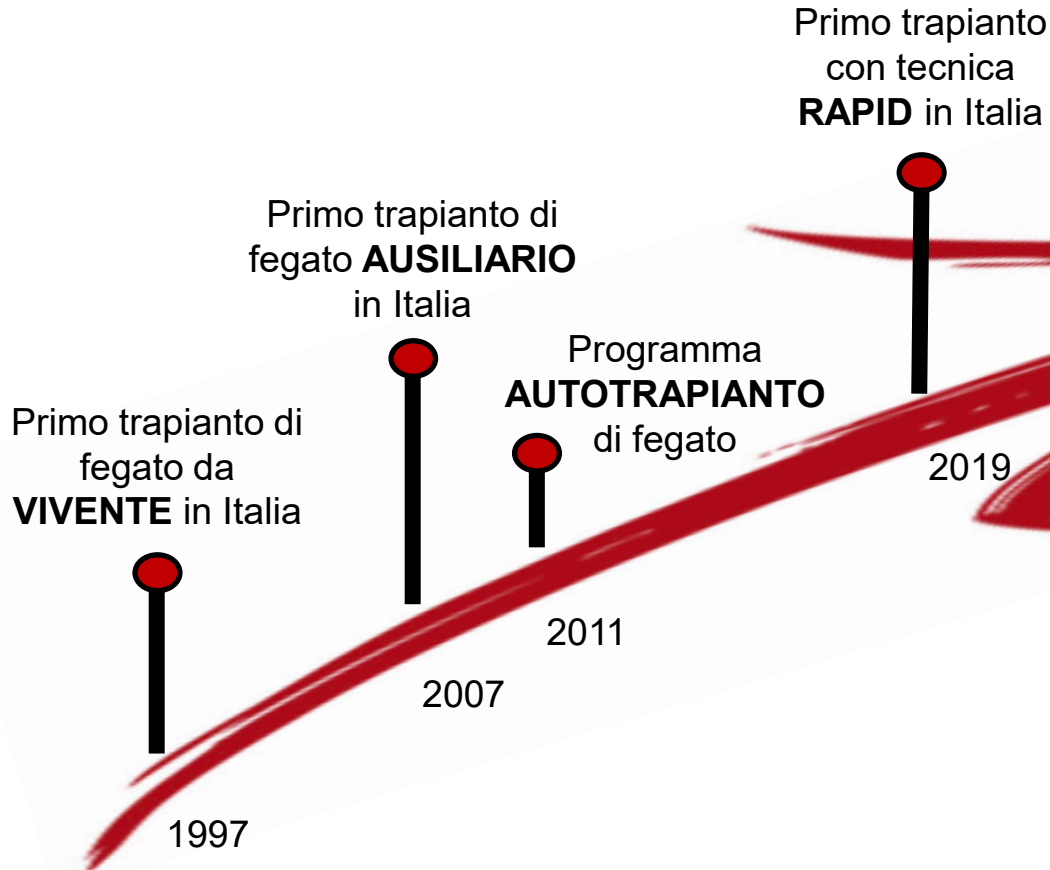
UOC Chirurgia Generale 2  
Epato-bilio-pancreatica e Trapianti di Fegato  
Direttore: Prof. Umberto Cillo

# Trapianti di fegato

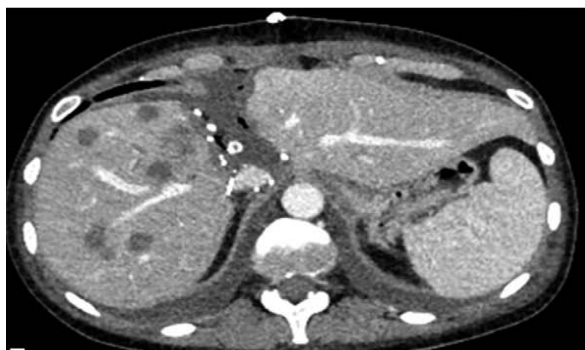
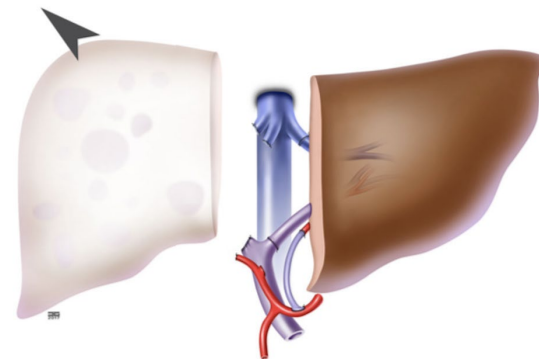
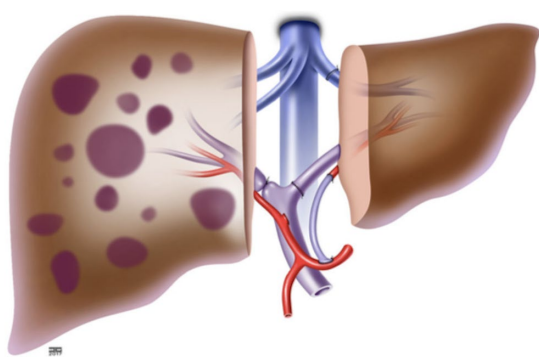
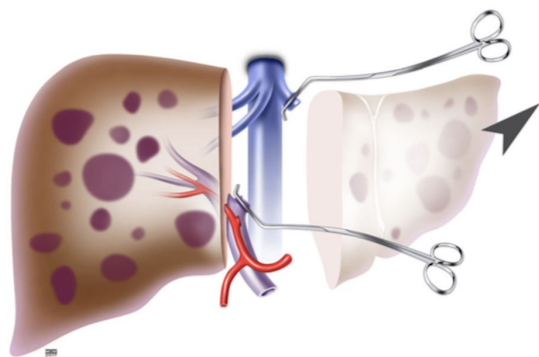


	N°
2019	101
2020	95
2021	102
2022	114
2023	120 ongoing
TOT (1990- 2022)	2074

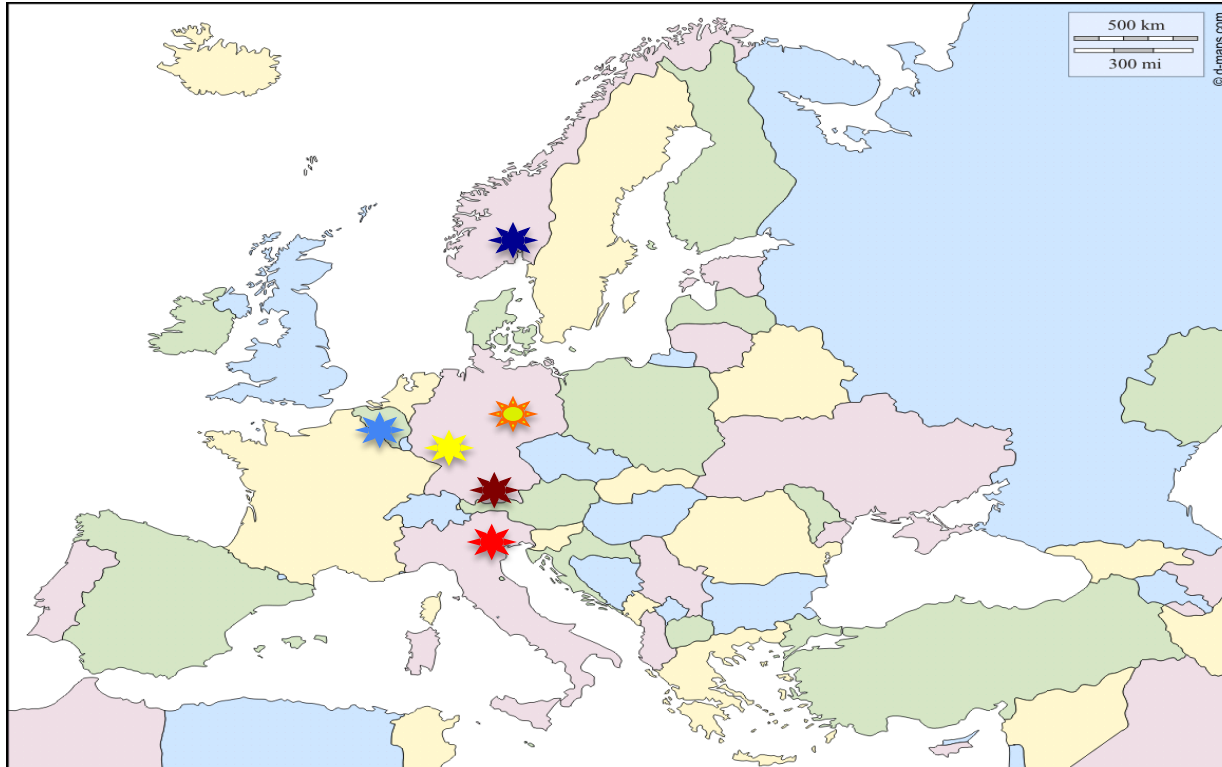
# Sfide trapiantologiche



# RAPID: il concetto



# 22 RAPID in 6 centri



-  Padova (n=4)
-  Jena
-  Brussels
-  Oslo
-  Munich
-  Tübingen

# Sfide trapiantologiche

Primo trapianto di  
fegato da  
**VIVENTE** in Italia

1997

Primo trapianto di  
fegato **AUSILIARIO**  
in Italia

2007

Programma  
**AUTOTRAPIANTO**  
di fegato

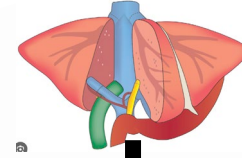
2011

Primo trapianto  
con tecnica  
**RAPID** in Italia

2019

Primo trapianto di  
2 fegati da vivente in  
un unico ricevente

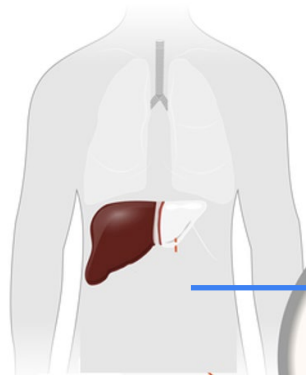
**DUAL LIVER**



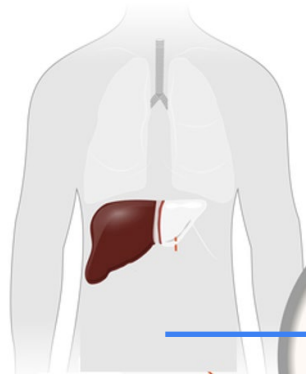
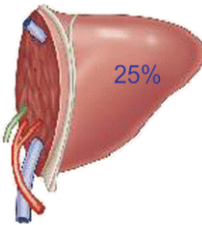
2023



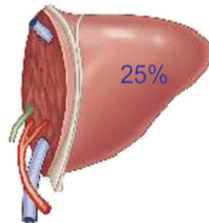
# DUAL LIVER: il concetto



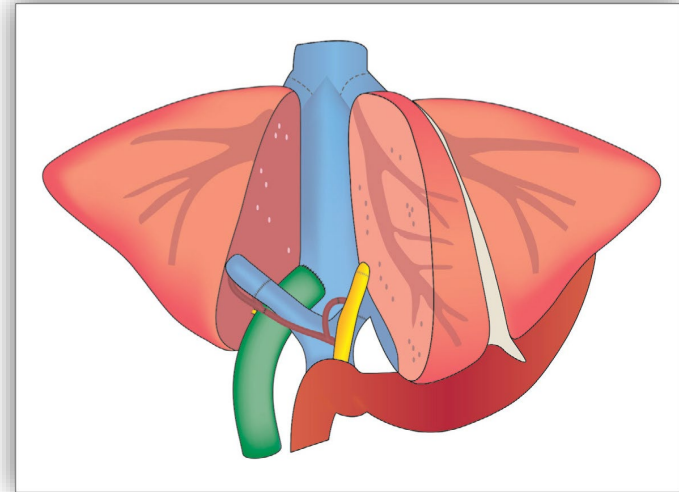
**DONATORE 1**



**DONATORE 2**



**RICEVENTE**





# Patogeni multiresistenti pre-LT



ORIGINAL ARTICLE

**Pre-transplant multidrug-resistant infections in liver transplant recipients-epidemiology and impact on transplantation outcome**

**865 pts: 2010-2019**

- Most common microorganism was *Klebsiella pneumoniae* (18%)
- Most common MDRO was ESBL-producing Enterobacterales (16%), and carbapenem resistant (CR) Enterobacterales (10%).
- Factors associated with MDRO infections before LT were previous use of therapeutic cephalosporin ( $p = .001$ ) and fluoroquinolone ( $p = .001$ ), SBP prophylaxis ( $p = .03$ ), ACLF before LT ( $p = .03$ ), and days of hospital stay pre-LT ( $p < .001$ )



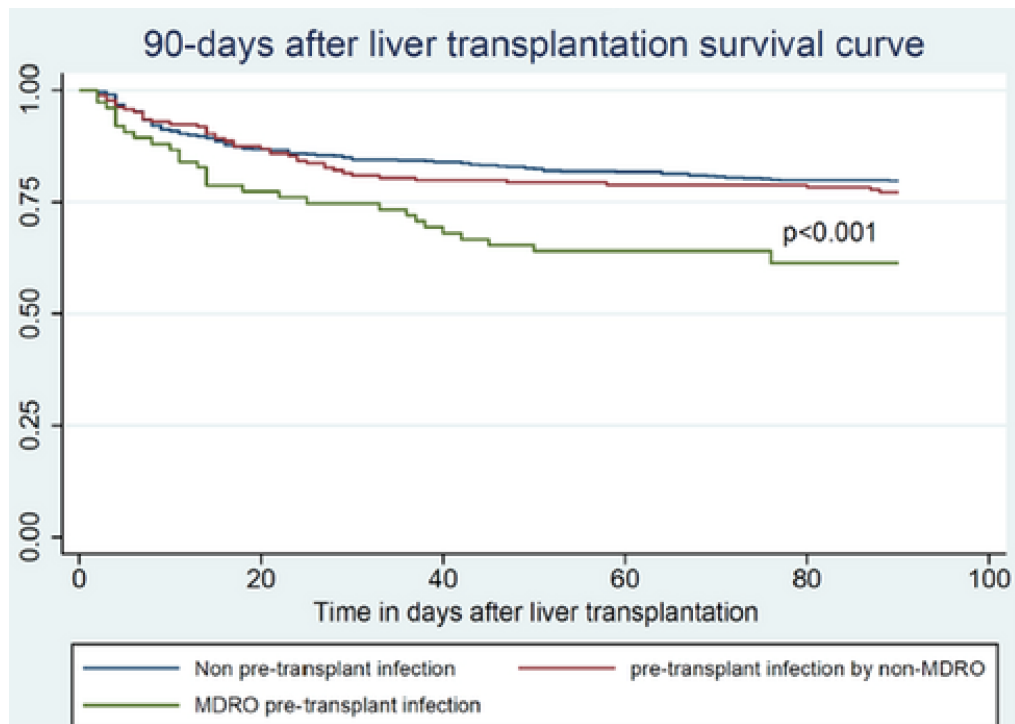
# Patogeni multiresistenti pre-LT

**Clinical** TRANSPLANTATION  
The Journal of Clinical and Translational Research

ORIGINAL ARTICLE

**Pre-transplant multidrug-resistant infections in liver transplant recipients-epidemiology and impact on transplantation outcome**

MDRO infections before LT have an important impact on survival after LT



# Caso clinico: M.C

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- Donna di **74 anni** affetta da cirrosi autoimmune con ascite refrattaria
- Anamnesi: anemia sideropenica, insufficienza venosa AAll, isterectomia
- Valutazione per trapianto epatico.  
PROTOCOLLO OVER 70: rischio basso ( $I=0.12$ )
- Luglio 2023: progressivo peggioramento funzione renale, diarrea (sospetto Clostridium), ascite e iponatriemia  
>>> Ricovero per accertamenti e completamento inserimento in LISTA TRAPIANTO

# Caso clinico: M.C

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- **Urinocolture:**
  - pos per E.Coli
  - **pos per Klebsiella Pneumoniae**
- **Tampone rettale:**
  - **pos per Klebsiella Pneumoniae**
  - **pos per E.Faecium VRE**
- **Coprocolture negative**
- **Emocolture negative**

**NON CONTROINDICAZIONI  
PER TRAPIANTO:**

PROFILASSI CON  
CEFTAZIDIME-AVIBACTAM +  
DAPTOMICINA

# Caso clinico: M.C

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- Agosto 2023 piressia con comparsa di addensamenti polmonari, peggioramento della funzione renale e rettoragia (colite ischemica?)
- **POLMONITE BILATERALE**
- Peggioramento del sensorio con necessità di intubazione
- Inizio di CVVH
- Colture: **emocoltura pos Bacillus cereus, tampone rettale pos KPC + E. Faecium VRE, urocoltura pos KPC**
- Settembre 2023: **DECESSO** in ICU

**SOSPESA DA LISTA  
TRAPIANTO**

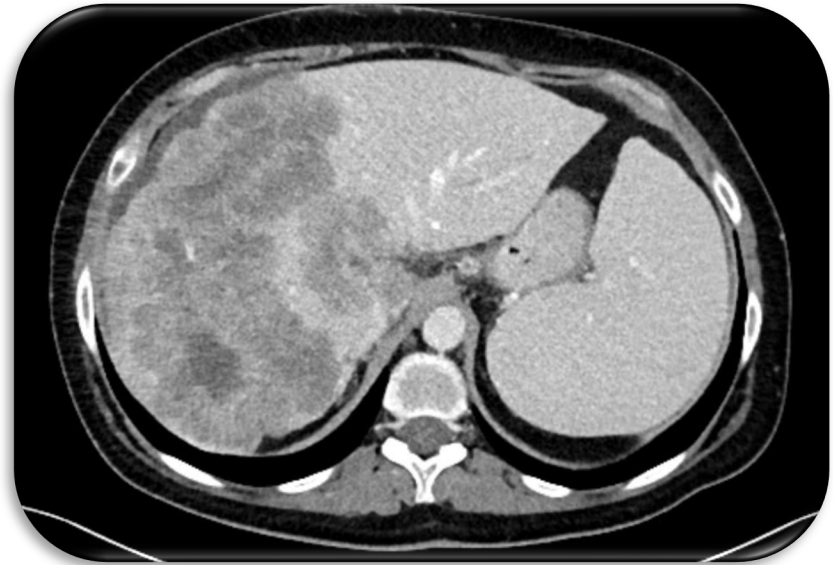
# Patogeni multiresistenti post-LT

Bacteria	Infection Risk Factors	Pre-LT Colonization Prevalence	Post-LT Infection Prevalence	Post-LT Infection-Related Mortality in Infected Patients
ESBLE [45–47]	ESBLE colonization, MELD > 25, reintervention	4–22%	4–27%	15–28% at 30 d
CRE [8,9,14,48–56]	CRE colonization, higher MELD at LT, intraoperative blood loss (>1500 mL), prolonged post-LT ICU stay and post-LT intubation, post-LT hemodialysis, combined transplant, biliary complications, reintervention, rejection	3–23%	2–26%	30–70% at 30 d
MDR Pseudomonas aeruginosa [44,57–59]	MDR-PA colonization, prolonged post-LT ICU stay and post-LT intubation	2–3%	2–3%	40% at 30 d
CRAB [44,60–62]	Pre-LT CRAB colonization, fulminant hepatitis, longer cold ischemia time, prolonged post-LT ICU stay and post-LT intubation, post-LT dialysis	0.3–11%	7–29%	50–65%
VRE [63–67]	VRE colonization, post-LT hemodialysis, length of post-LT hospital stay, bile leak	12–27%	2–9%	NA, but overall mortality increased in VRE-colonized
MRSA [13,58,68,69]	MRSA colonization, decreased prothrombin time ratio	3–13%	11%	6–60% at 30 d

# Caso clinico: C.F

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- Donna di **52 anni** affetta da metastasi non resecabili da adenocarcinoma del colon
- 2021 Emicolectomia sinistra
- 3 linee di chemioterapia
- **NON ARRUOLABILE** in protocolli trapiantologici di centro (RAPID/MELODIC)



# Caso clinico: C.F

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- **Aprile 2023 TRAPIANTO DUAL LIVER**
  - ✧ **20 ORE DI INTERVENTO**
  - ✧ **8 SUTURE CON TECNICA MICROCHIRURGICA**
  - ✧ **1 CIRCOLAZIONE EXTRACORPOREA**
  - ✧ **1 DERIVAZIONE BILIARE ESTERNA (previsto 2 look chirurgico)**



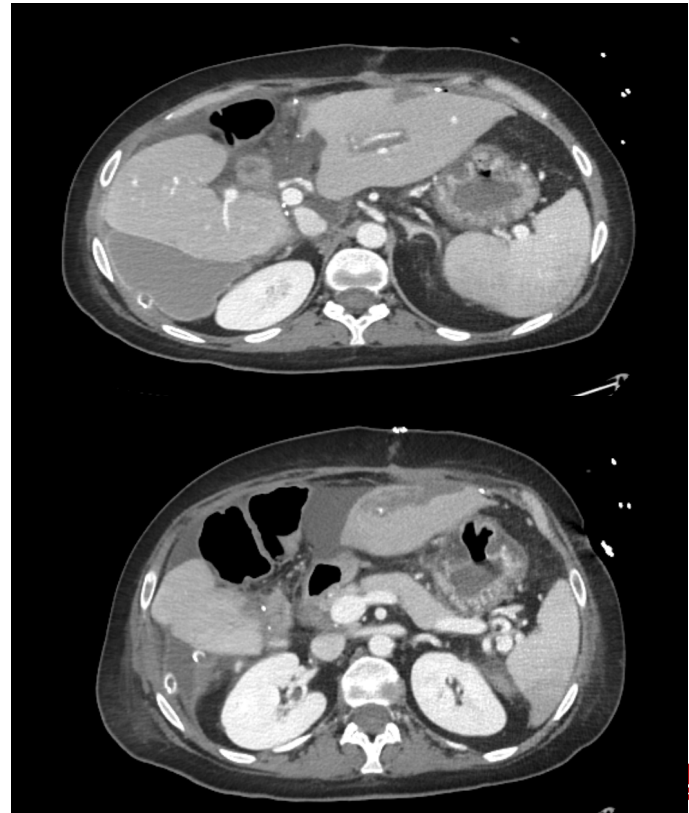
# Caso clinico: C.F

## TRAPIANTO DUAL LIVER

- **Chirurgia:**
  1. Raccolte addominali
  2. Area ischemica parenchimale
  3. Pseudoaneurisma a.femorale

Necessari **WASHOUT ADDOMINALE** con  
sostituzione drenaggi + **EPATOTOMIA**

**RAFFIA FEMORALE**



# Caso clinico: C.F

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- **TRAPIANTO DUAL LIVER**
- **Colture post-operatorie:**
  - emocolture negative;
  - **drenaggio addominale pos Klebsiella Pneumoniae R carbapenemi, E. Faecium;**
  - **tampone rettale pos Klebsiella Pneumoniae**
  - **BAS pos per Klebsiella Pneumoniae R carbapenemi**
- **Terapia antibiotica:** Zavicefta, Linezolid, Merrem, Fosfomicina, Caspofungina
- Giugno 2023: **DIMISSIONE**

**COLTURE: NEGATIVE**  
**Tampone rettale: negativizzato**  
ad agosto