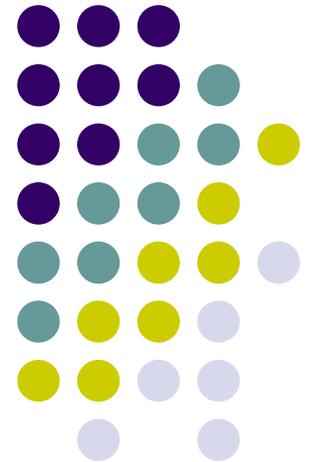
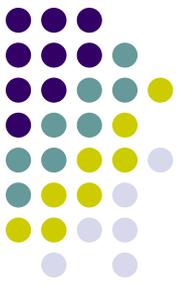


栓塞-肺栓塞

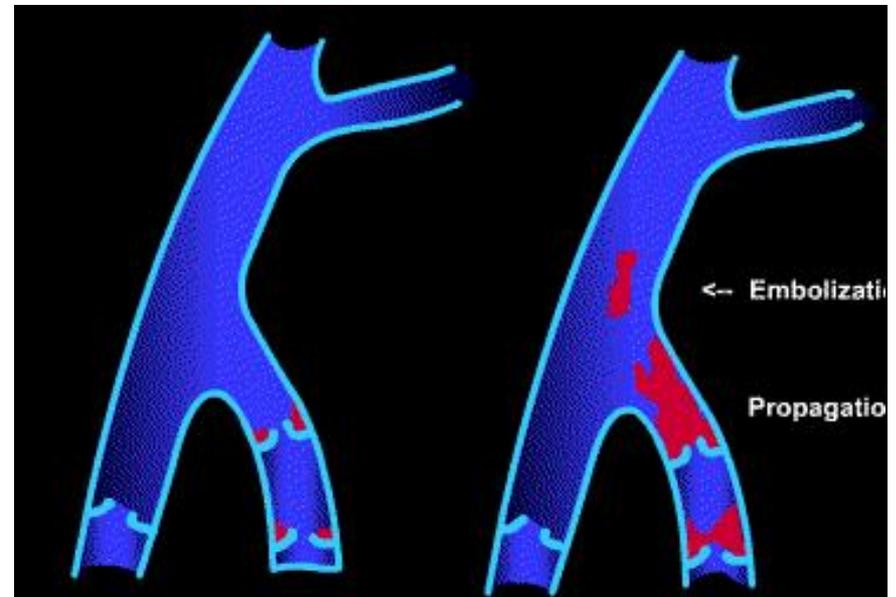
徐璐





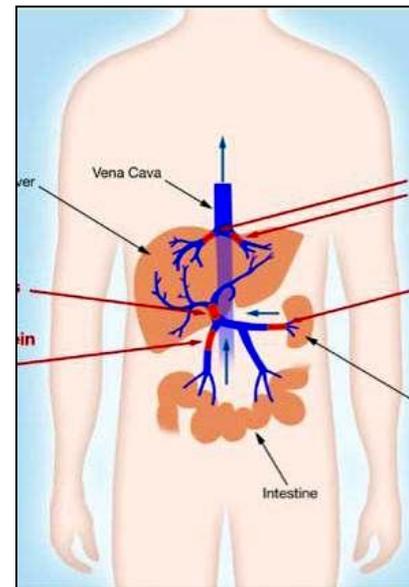
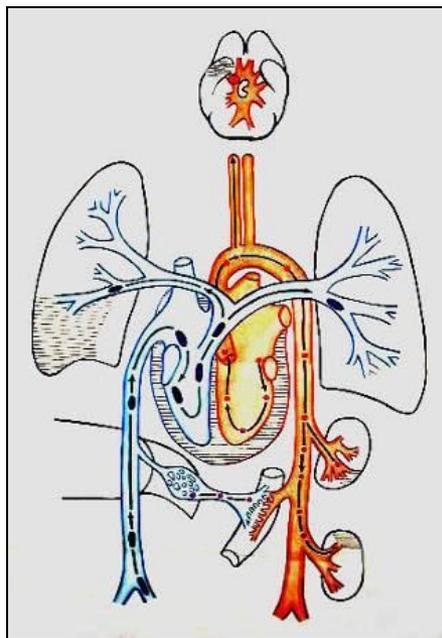
栓塞

- 定义：
 - 在循环血液中出现不溶于血液的异常物质随血液流动，阻塞管腔的过程称为栓塞
- 绝大多数为血栓栓塞



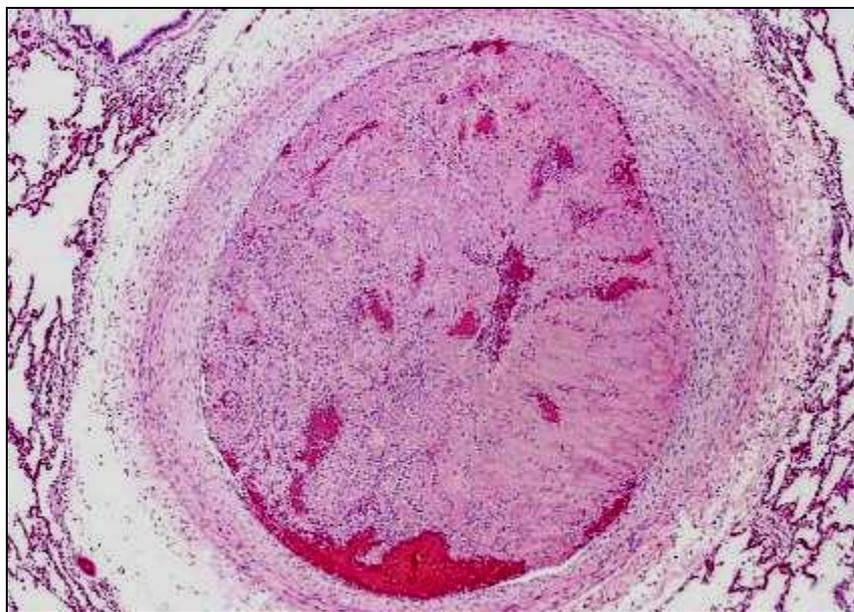
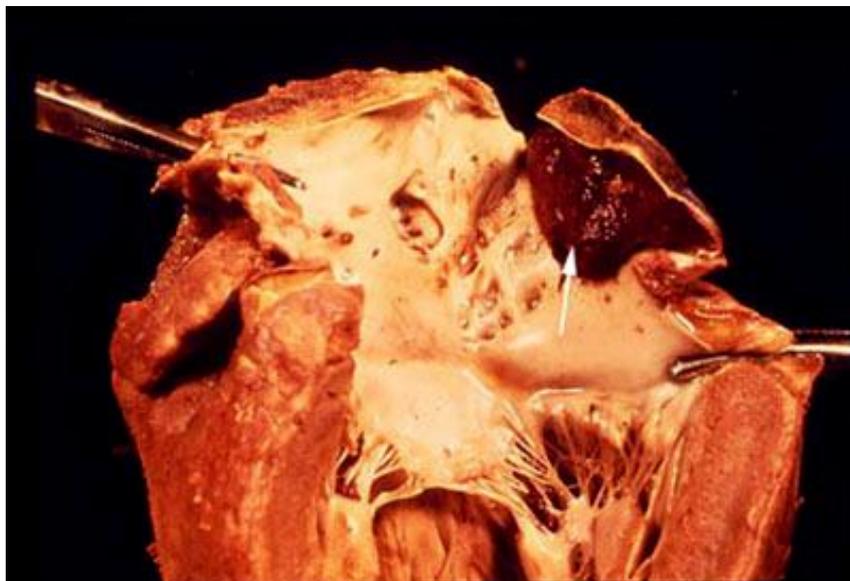
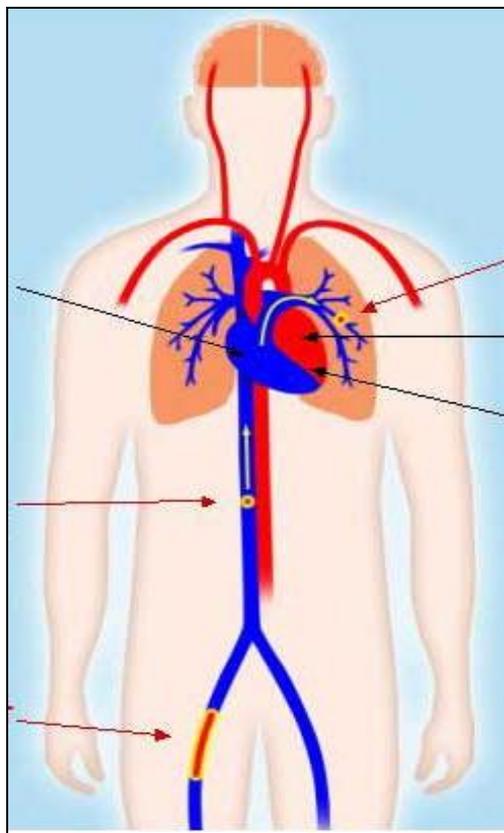
栓塞

- 栓子的运行途径
 - 左心和体循环
 - 右心和肺循环
 - 门静脉



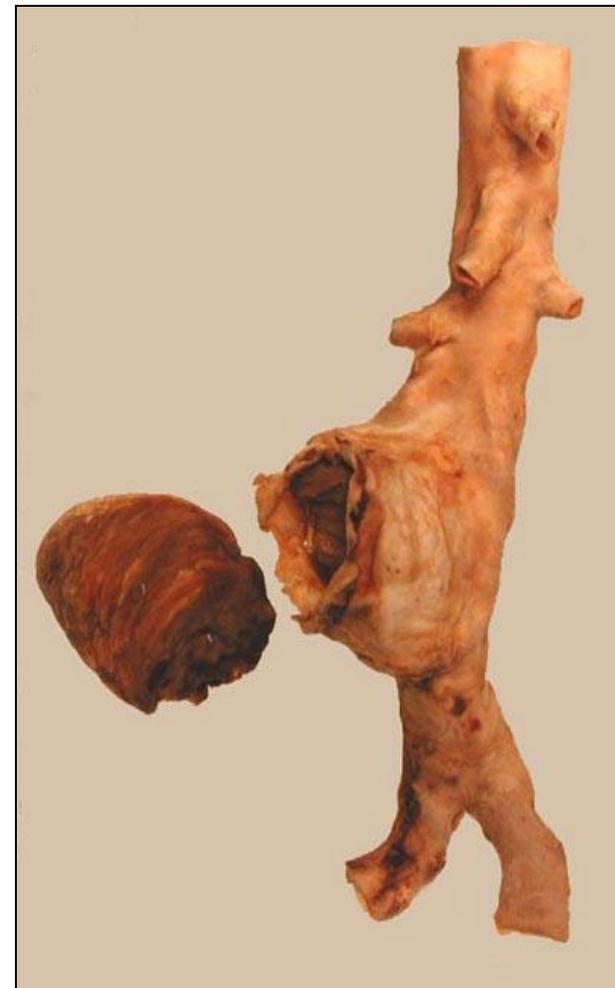
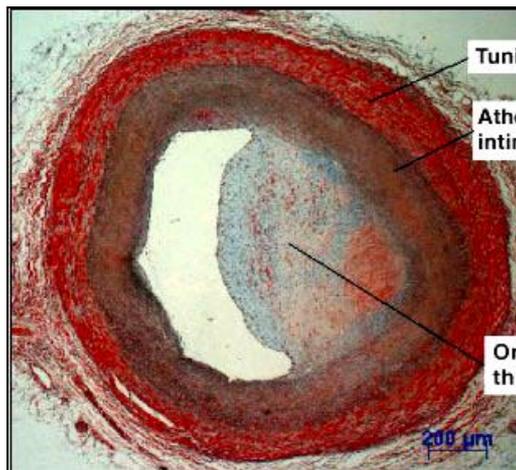
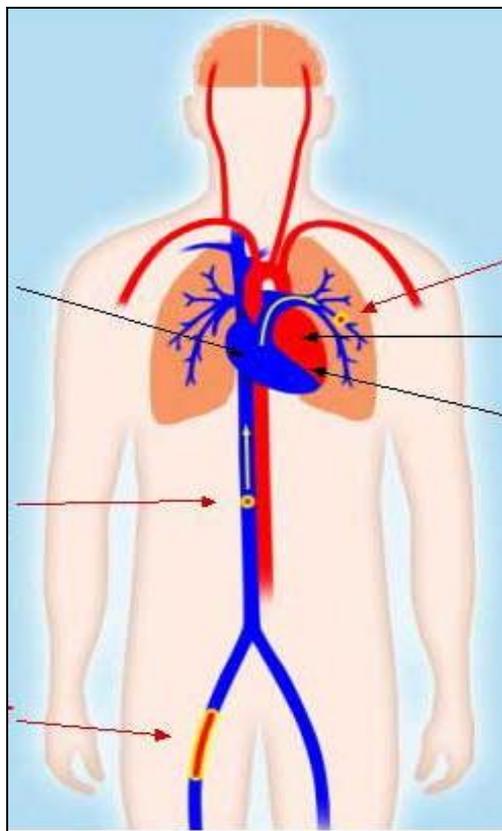
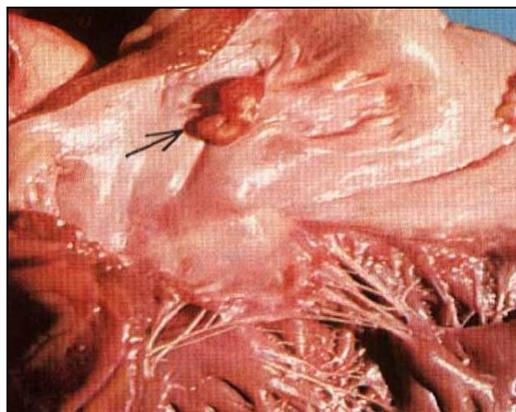
栓塞

- 肺循环



栓塞

- 体循环

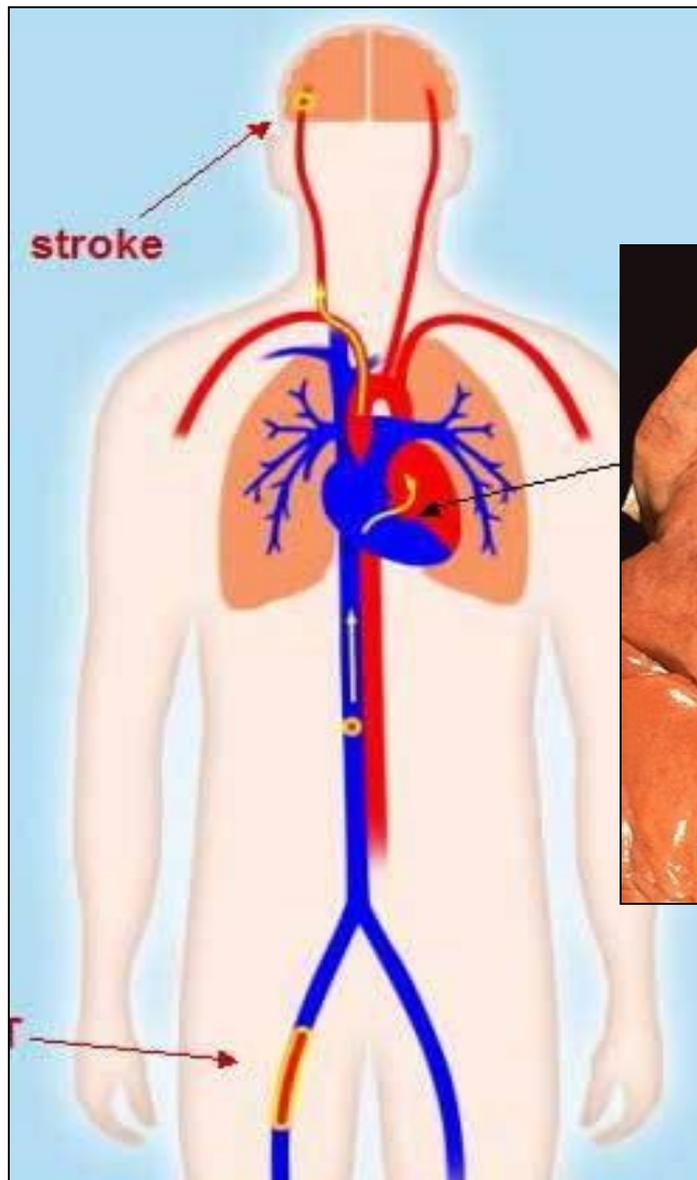


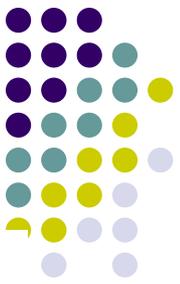


栓子运行途径

● 交叉性栓塞

房，室间隔缺损或
动静脉瘘的患者，
栓子通过缺损处，
由压力高的一侧进
入压力低的一侧，
产生动静脉系统栓
子的交叉运行，形
成交叉性栓塞。





栓子运行途径

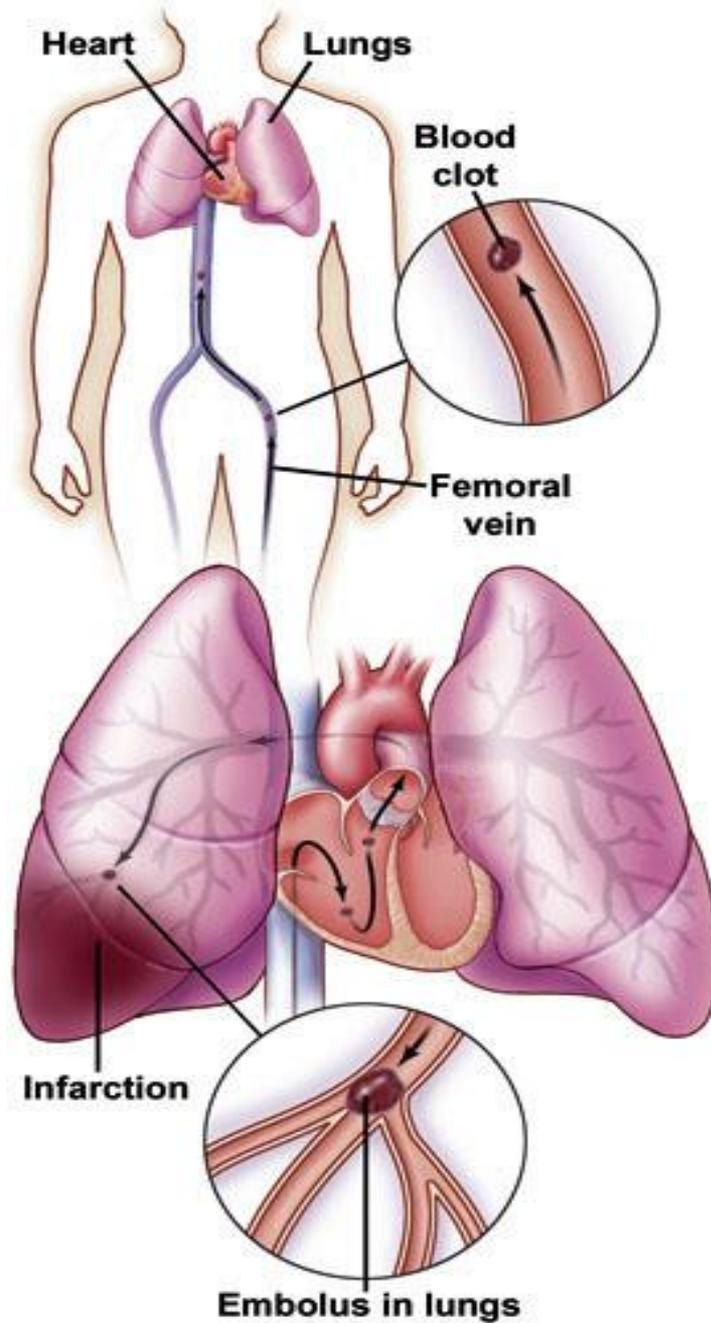
- 逆行性栓塞

- 下腔静脉内的栓子
- 在胸腔，腹腔
- 压力急剧升高（如咳嗽等）
- 可逆血流方向运行
- 在肝静脉肾静脉等分支内形成逆向性栓塞。



血栓栓塞

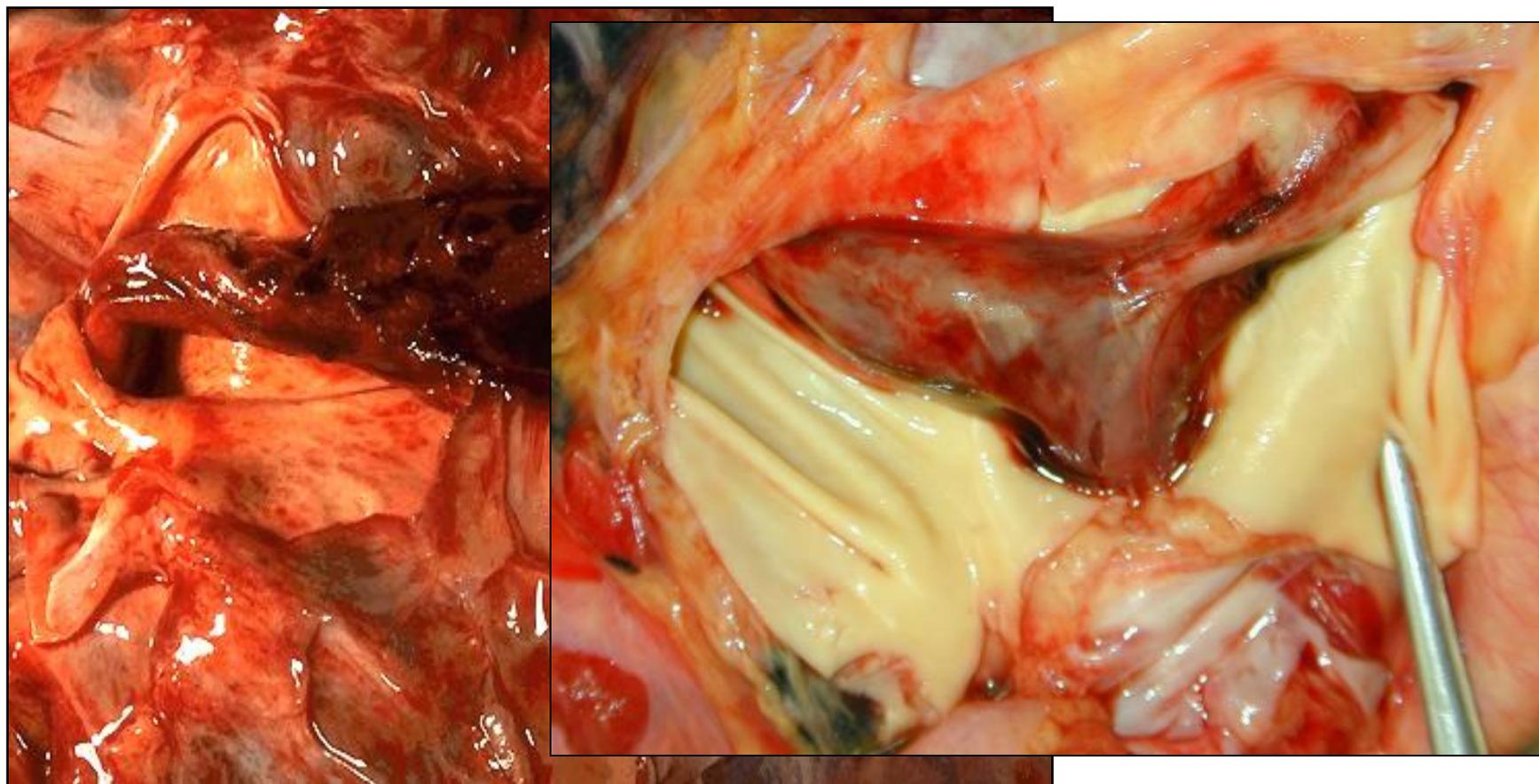
- 肺动脉栓塞
- 栓子来源





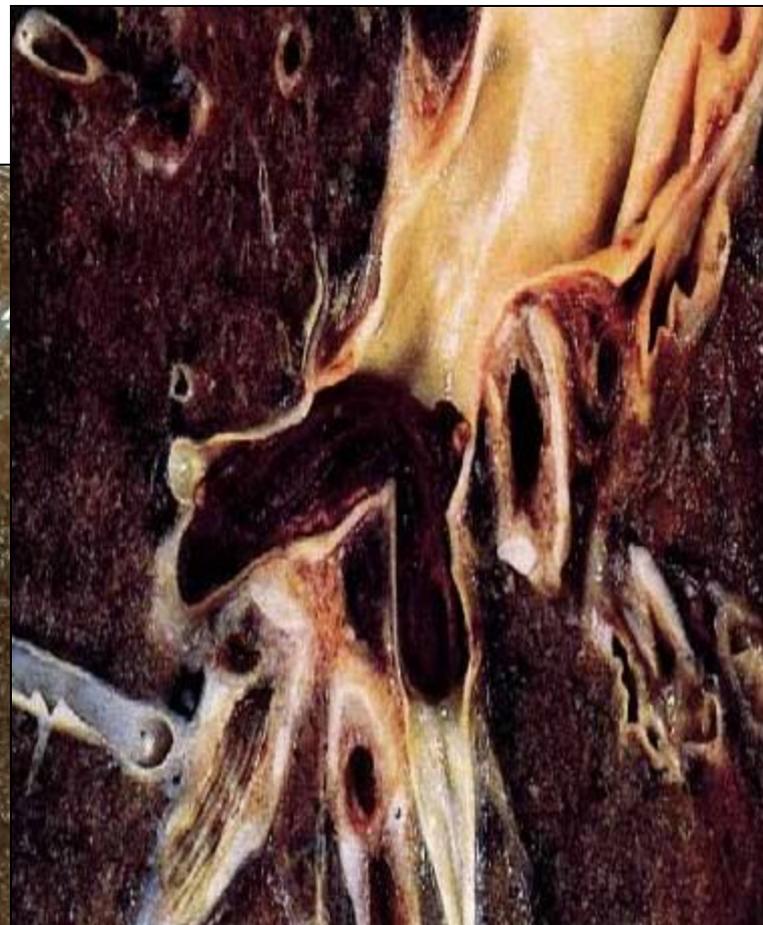
血栓栓塞

- 肺动脉栓塞（骑跨栓塞）



血栓栓塞

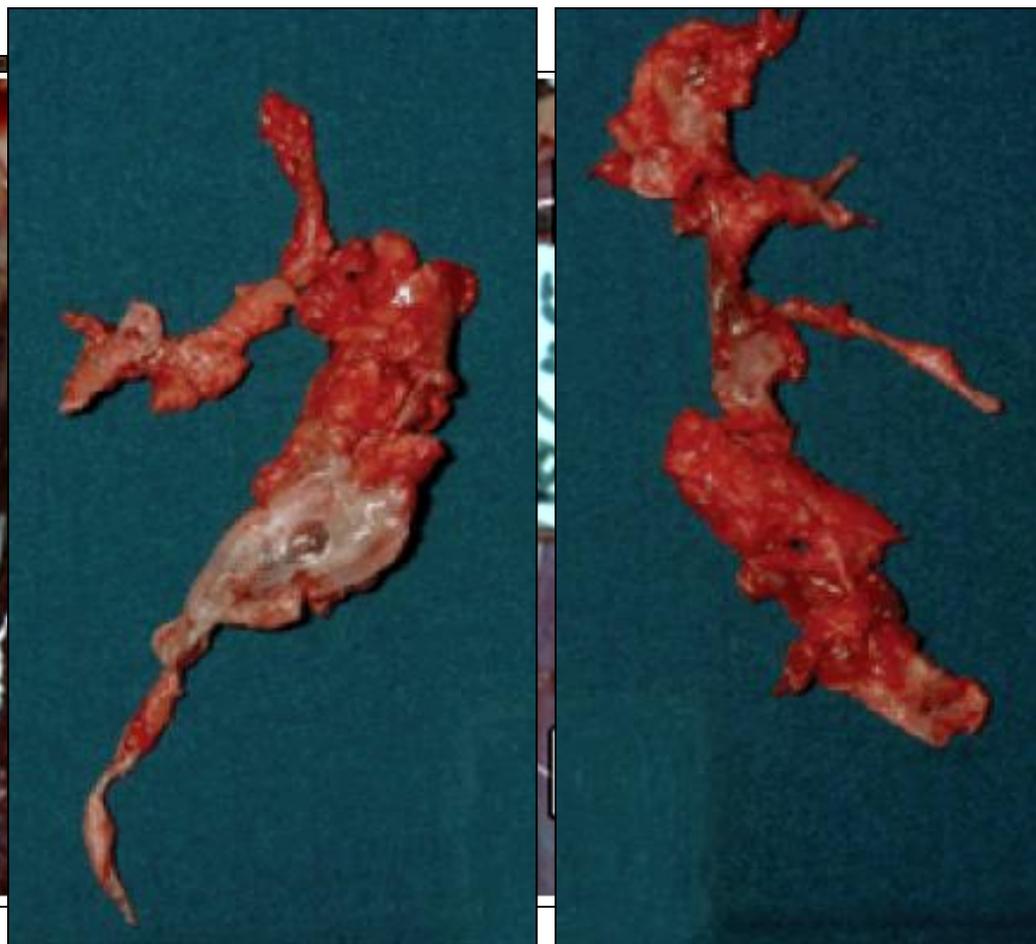
- 肺动脉栓塞



血栓栓塞



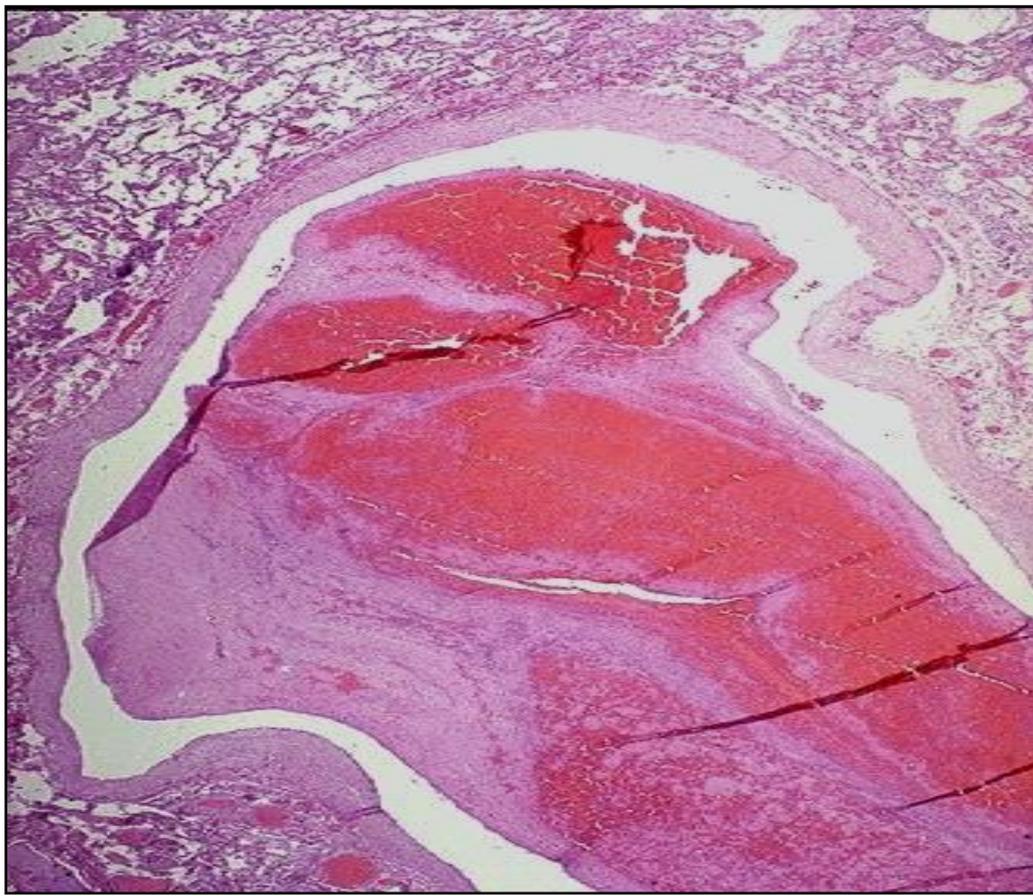
- 肺动脉栓塞



血栓栓塞

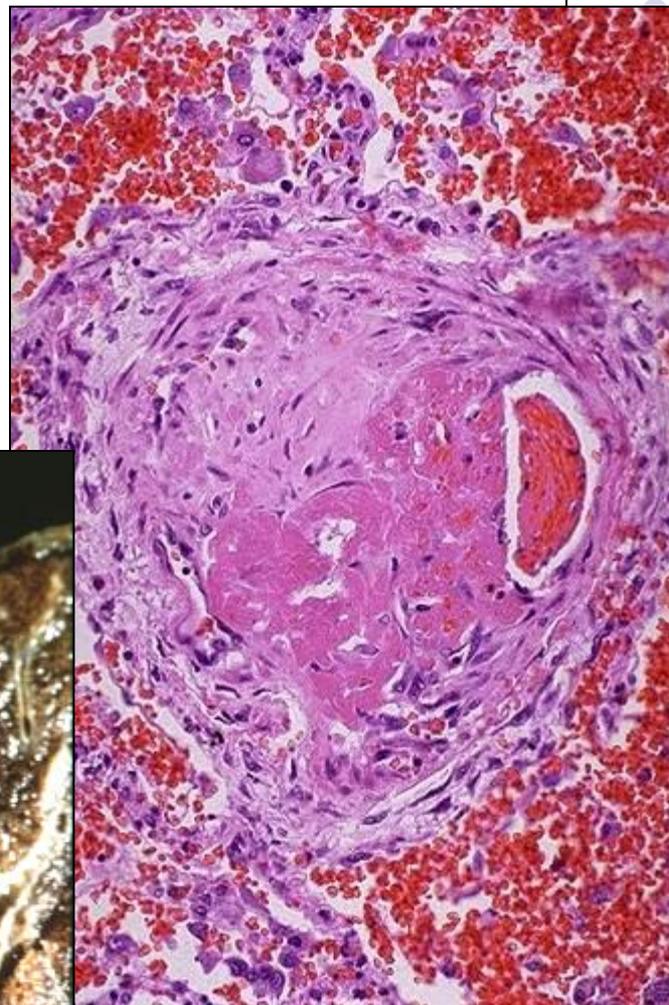
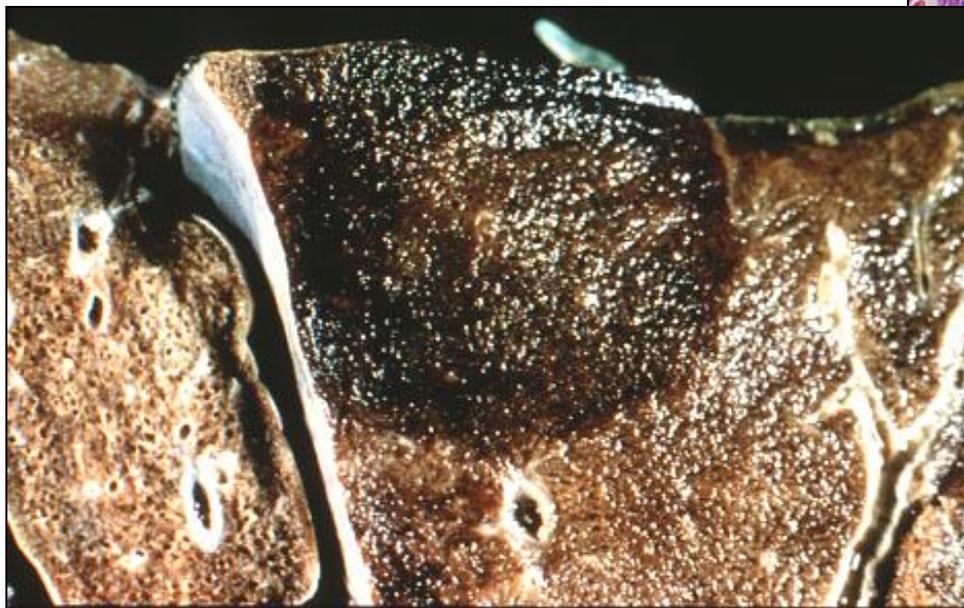


- 肺动脉栓塞



血栓栓塞

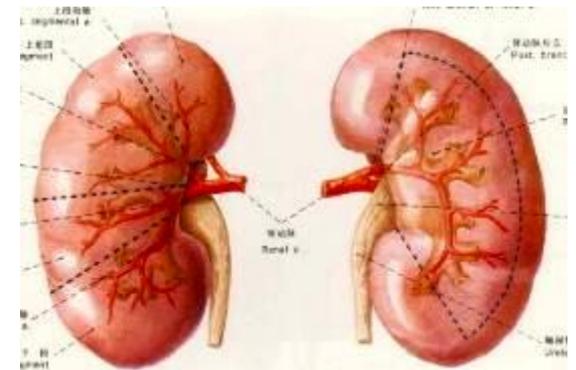
- 肺的双重血液循环
- 肺卒中（骑跨栓塞）
- 肺出血性梗死





血栓栓塞

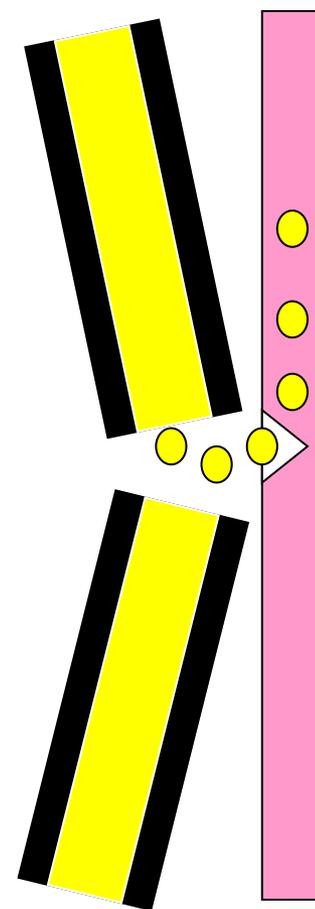
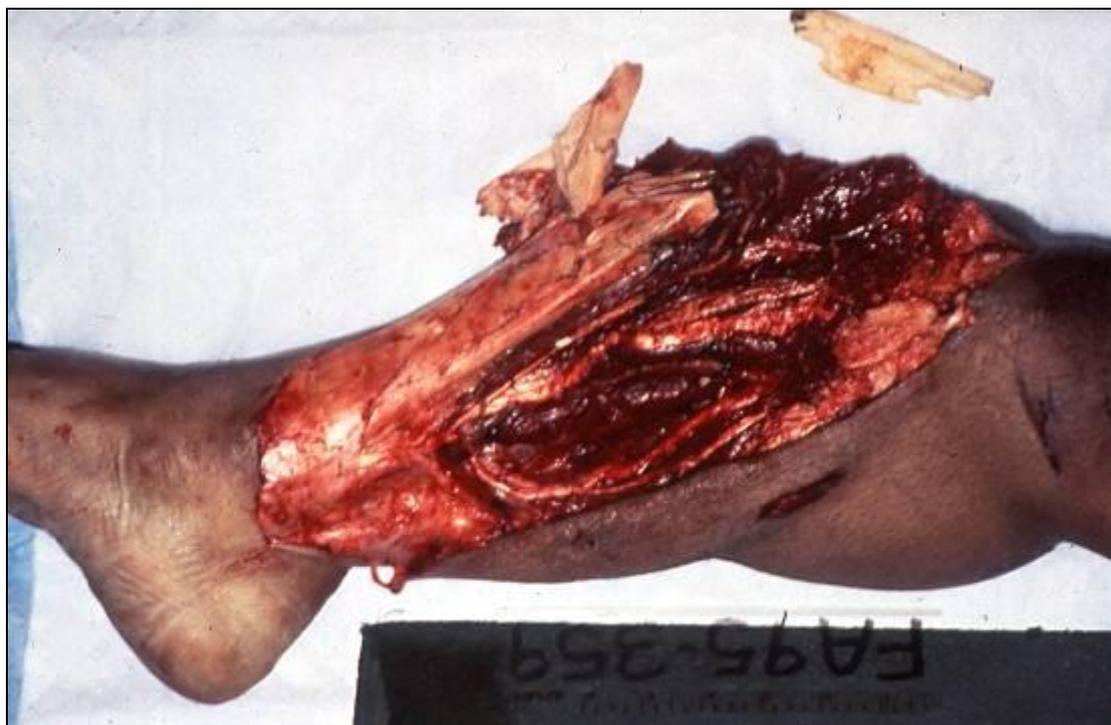
- 体循环动脉栓塞
- 来源
 - 心腔内附壁血栓 (80%)
 - 动脉粥样硬化斑块继发血栓
 - 动脉瘤血栓
 - 瓣膜赘生物
- 梗死（脑，脾，肾，下肢）





脂肪栓塞

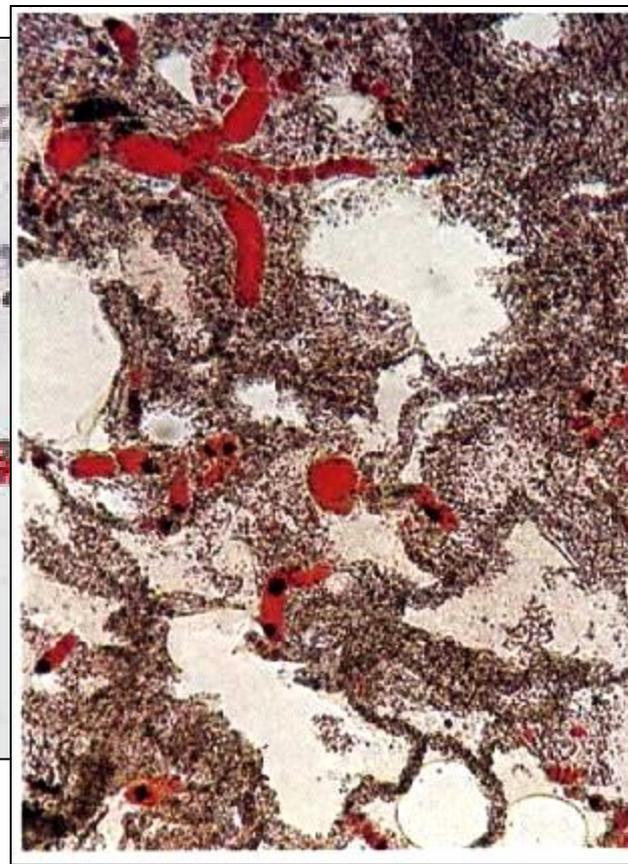
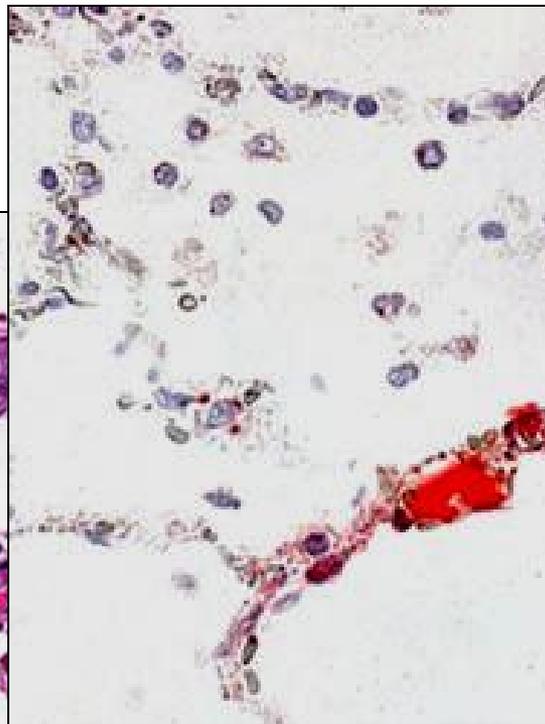
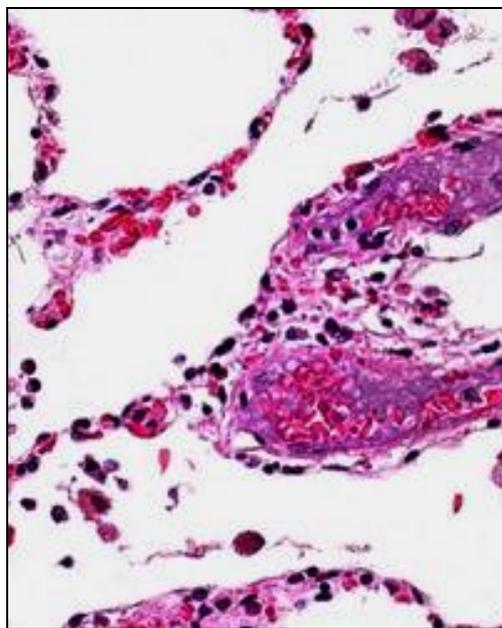
- 发生率高，通常无严重后果
- 长骨或骨盆骨折





脂肪栓塞

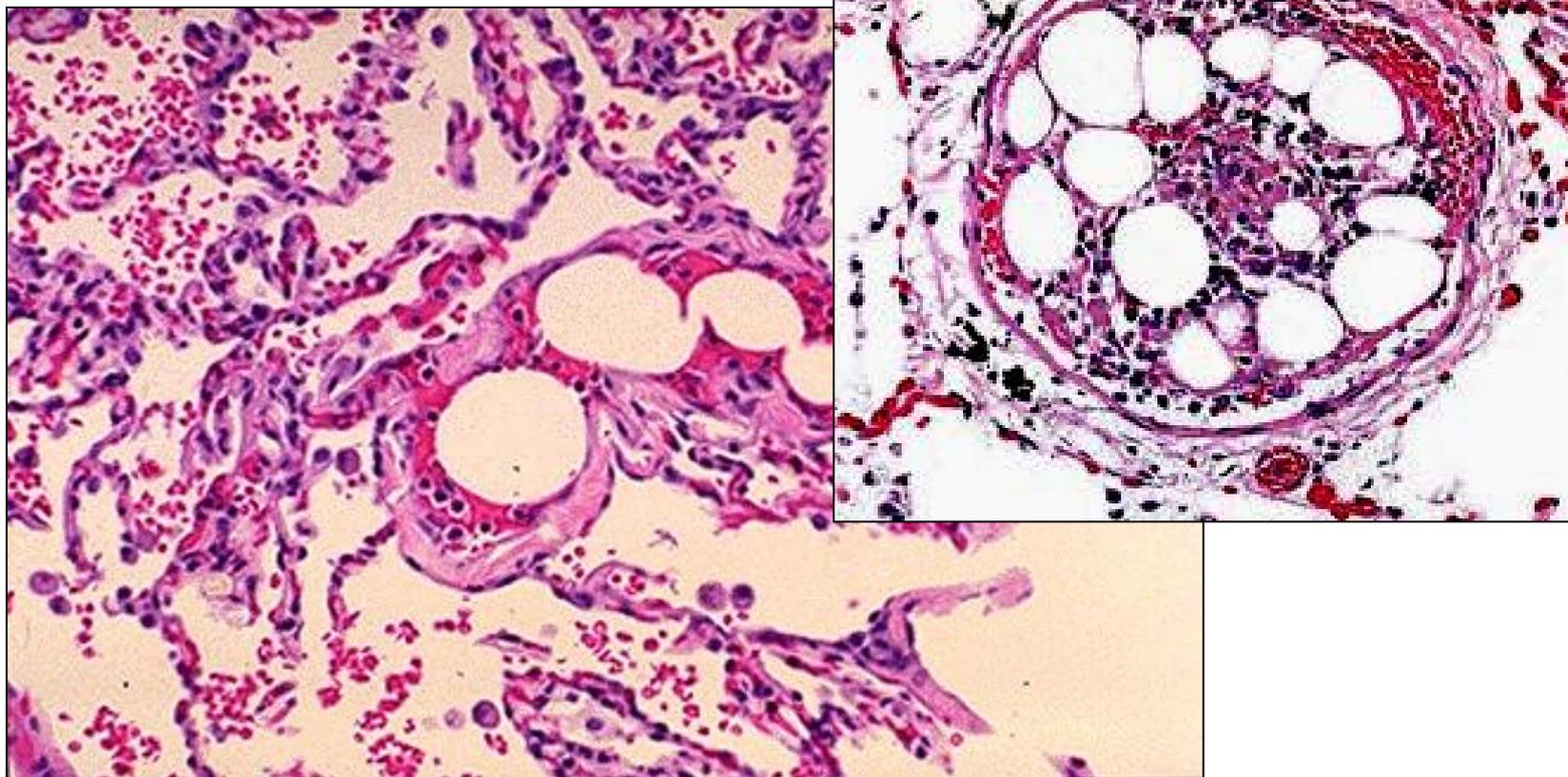
- 脂滴 ($>20\ \mu\text{m}$)
进入肺动脉
肺循环障碍



脂肪栓塞



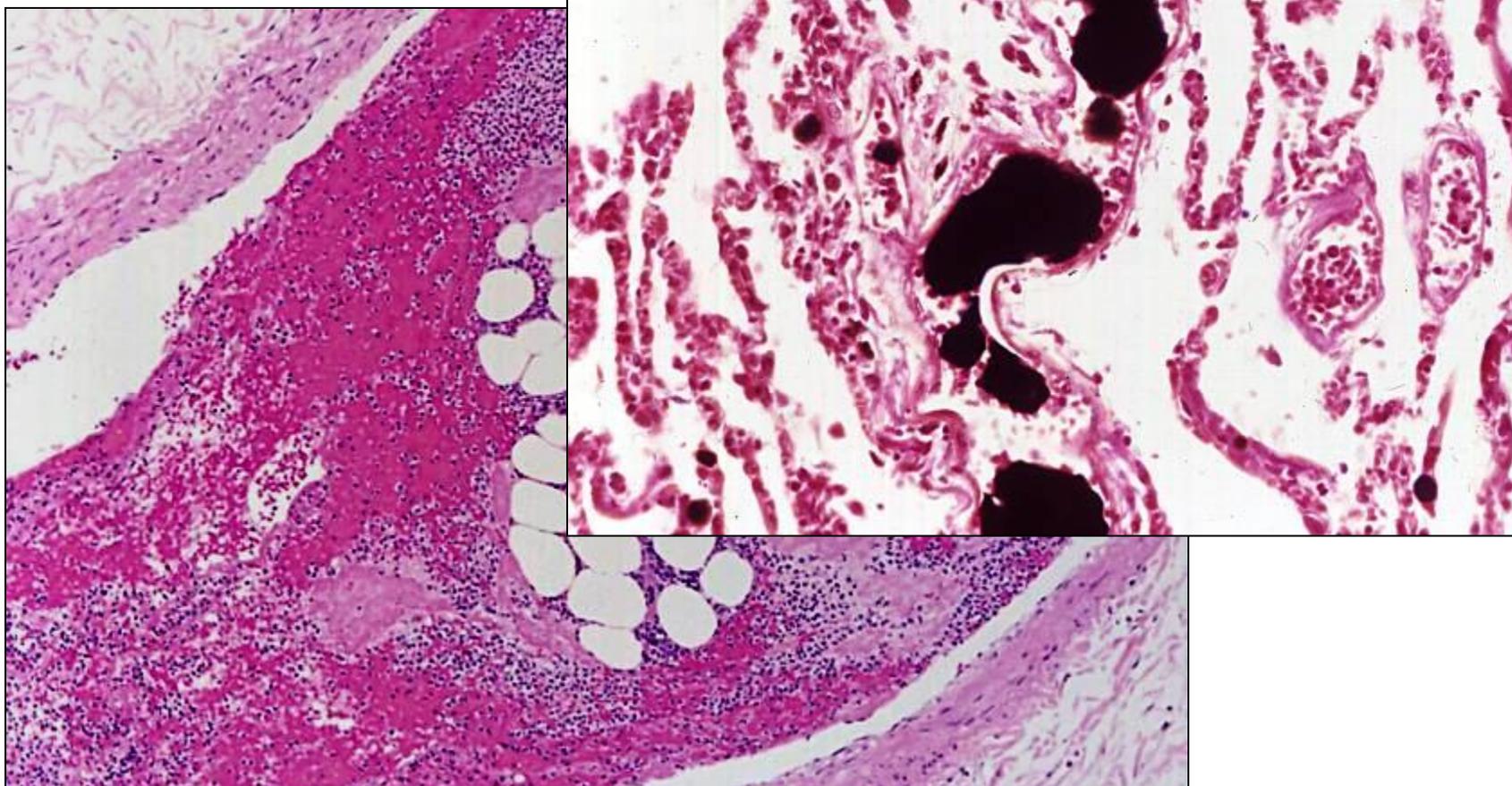
- 肺循环

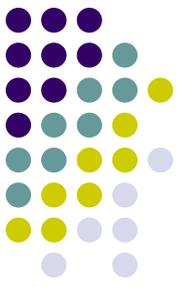


脂肪栓塞



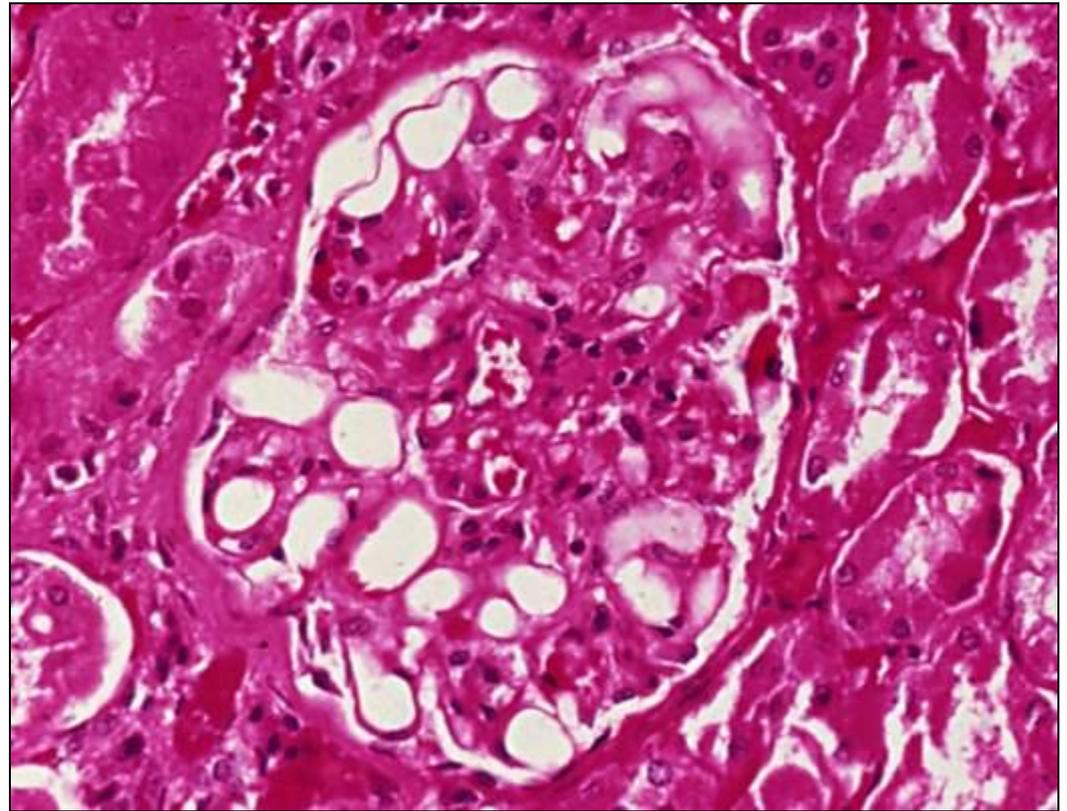
- 肺循环





脂肪栓塞

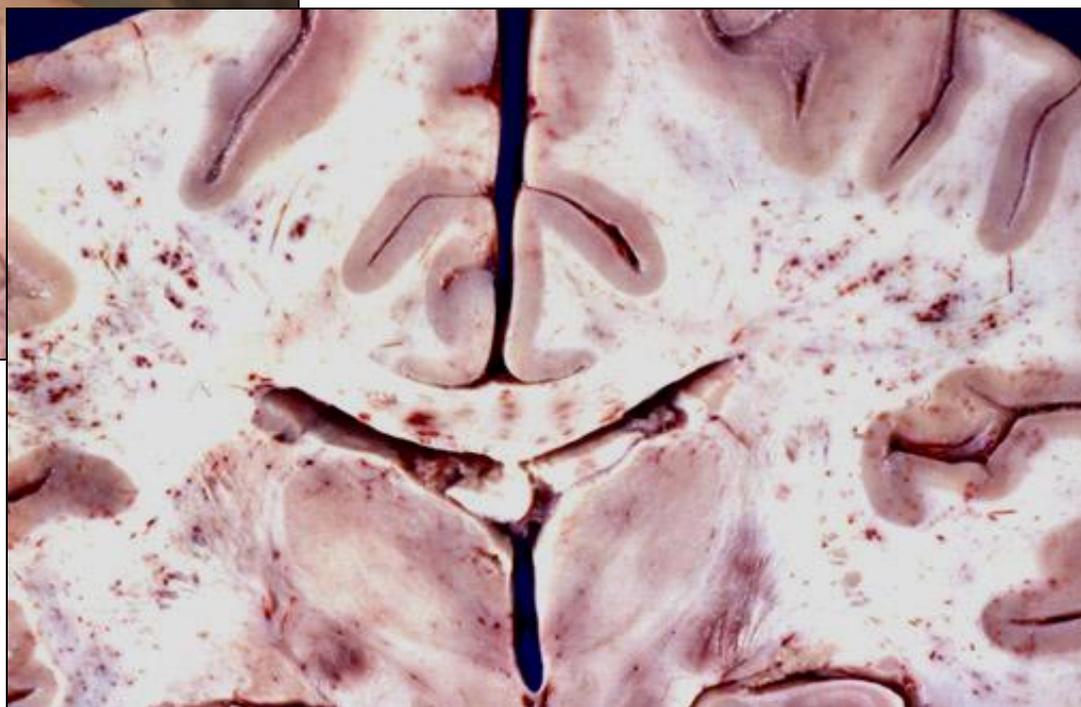
- 脂滴 ($<20\ \mu\text{m}$)
进入体动脉
体循环障碍
进入血脑屏障



脂肪栓塞



- 体循环

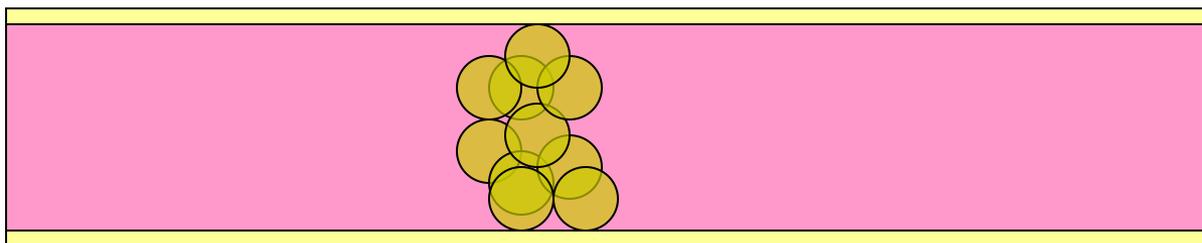




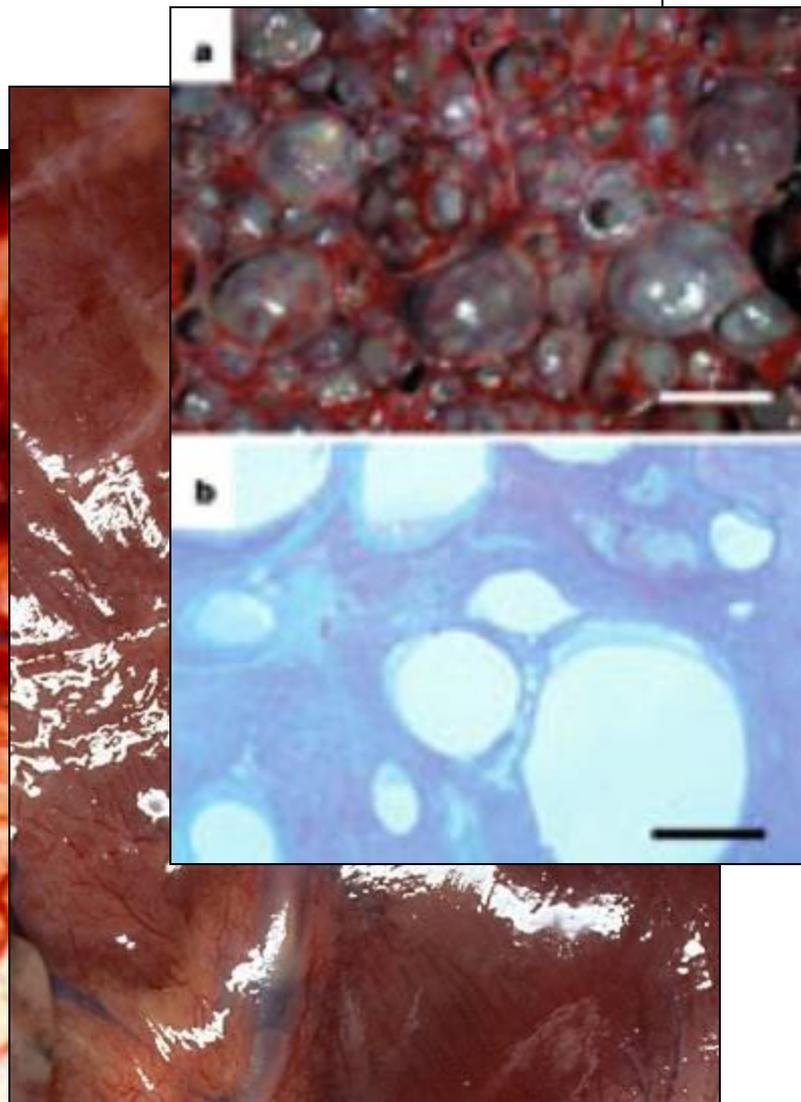
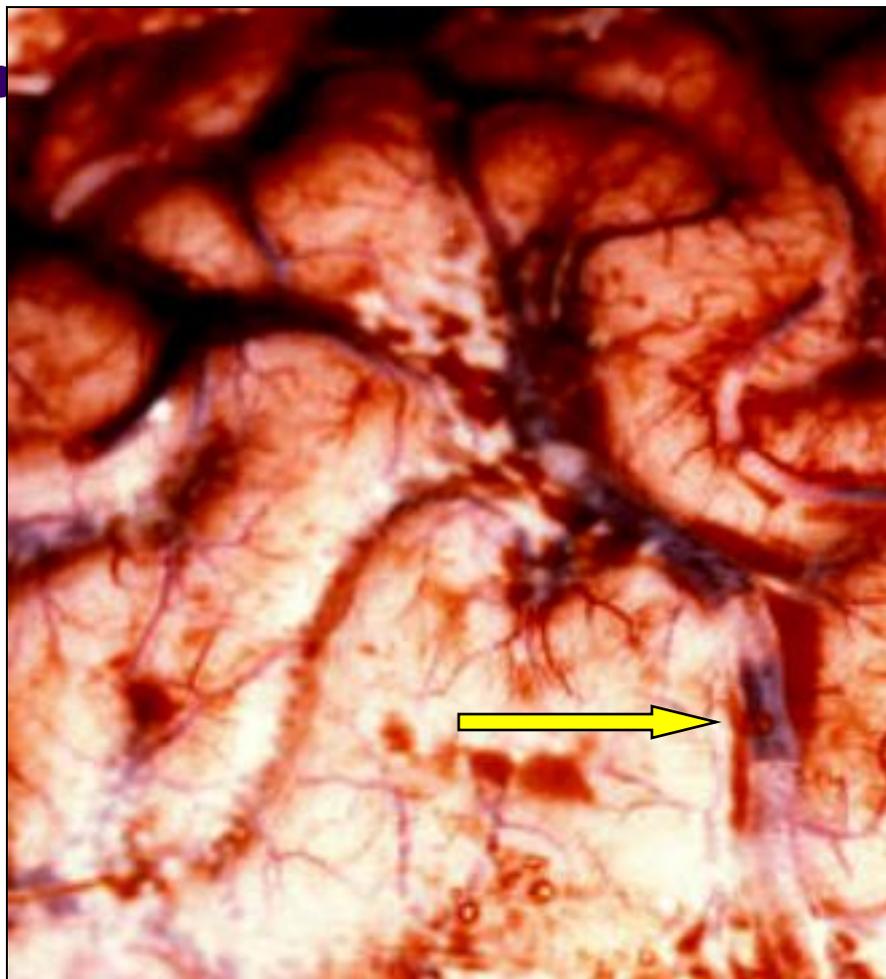
气体栓塞

- 定义

- 大量气体进入血液，
- 血中结合状态的气体迅速游离出来
- 阻塞血管或心腔



气体栓塞





气体栓塞

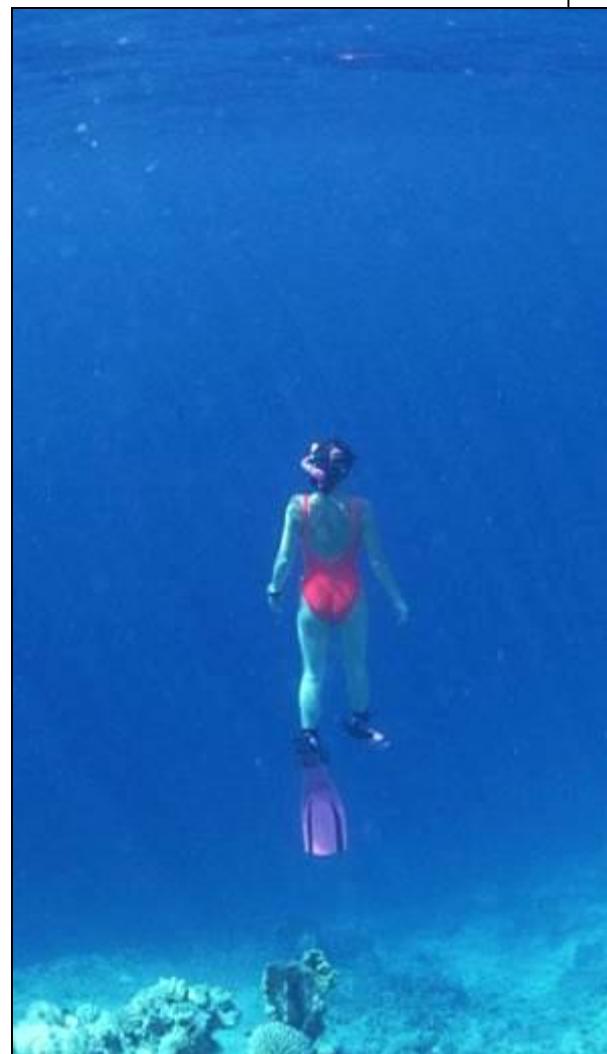
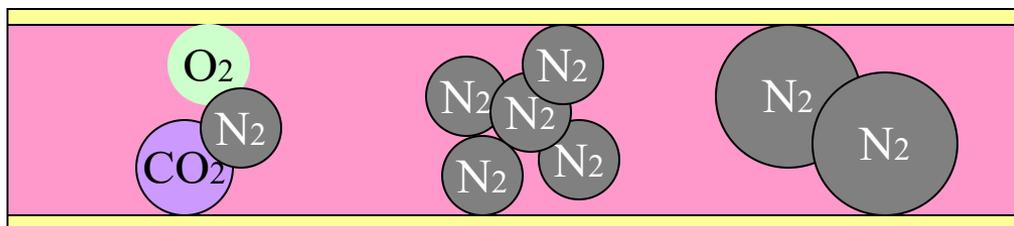
- 空气栓塞
 - 头颈，上胸部手术或创伤
 - >100ml时 ， 猝死



气体栓塞

- 减压病

- 氮气释放，阻塞血管
- 影响脏器功能
- 肌肉，骨关节症状

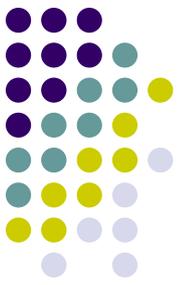




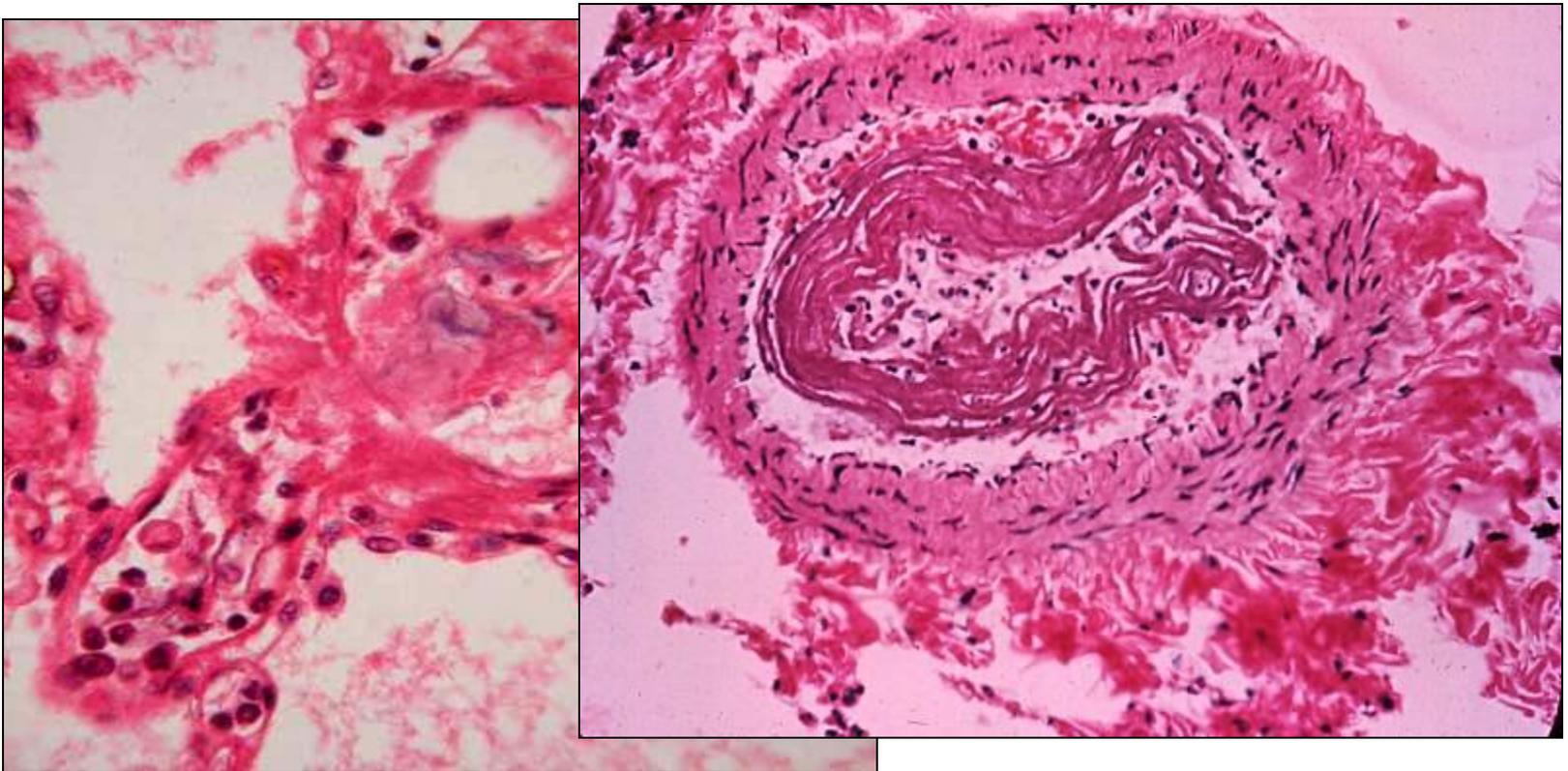
羊水栓塞

- 发生率低，病死率高
- 分娩中或分娩后短时间内
- 死亡机制
 - 机械性
 - 反射性血管反应
 - 过敏性
 - DIC

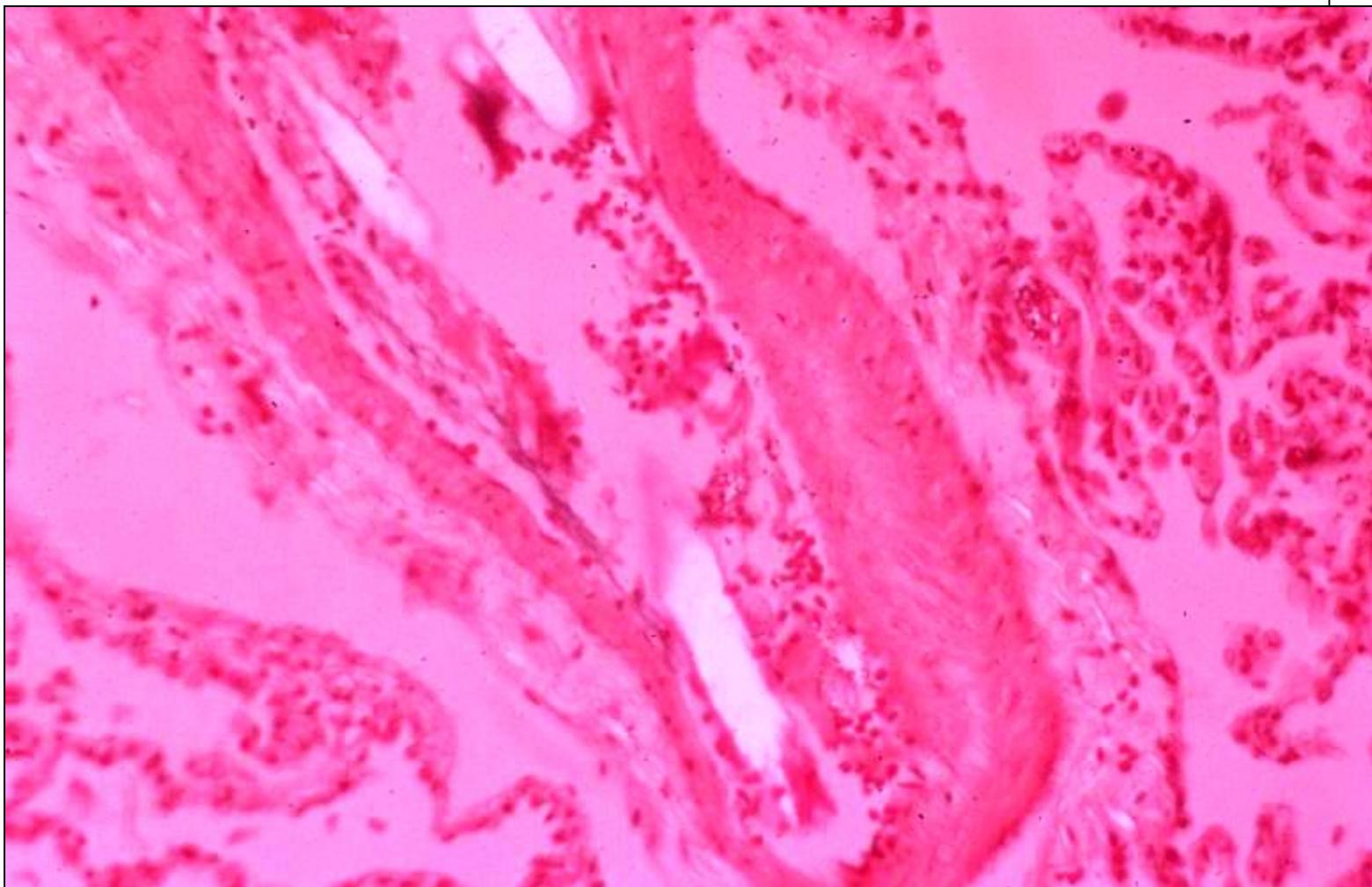
羊水栓塞



- 形态学：
 - 纤维素性血栓，羊水成分



羊水栓塞



其他栓塞

- 癌栓
- 菌栓
- 寄生虫
- 异物等

