IO in the COVID World: France

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Disclosures

Marc Sapoval, MD, PhD: Consultant — Boston Scientific, Merit Medical, ReCor

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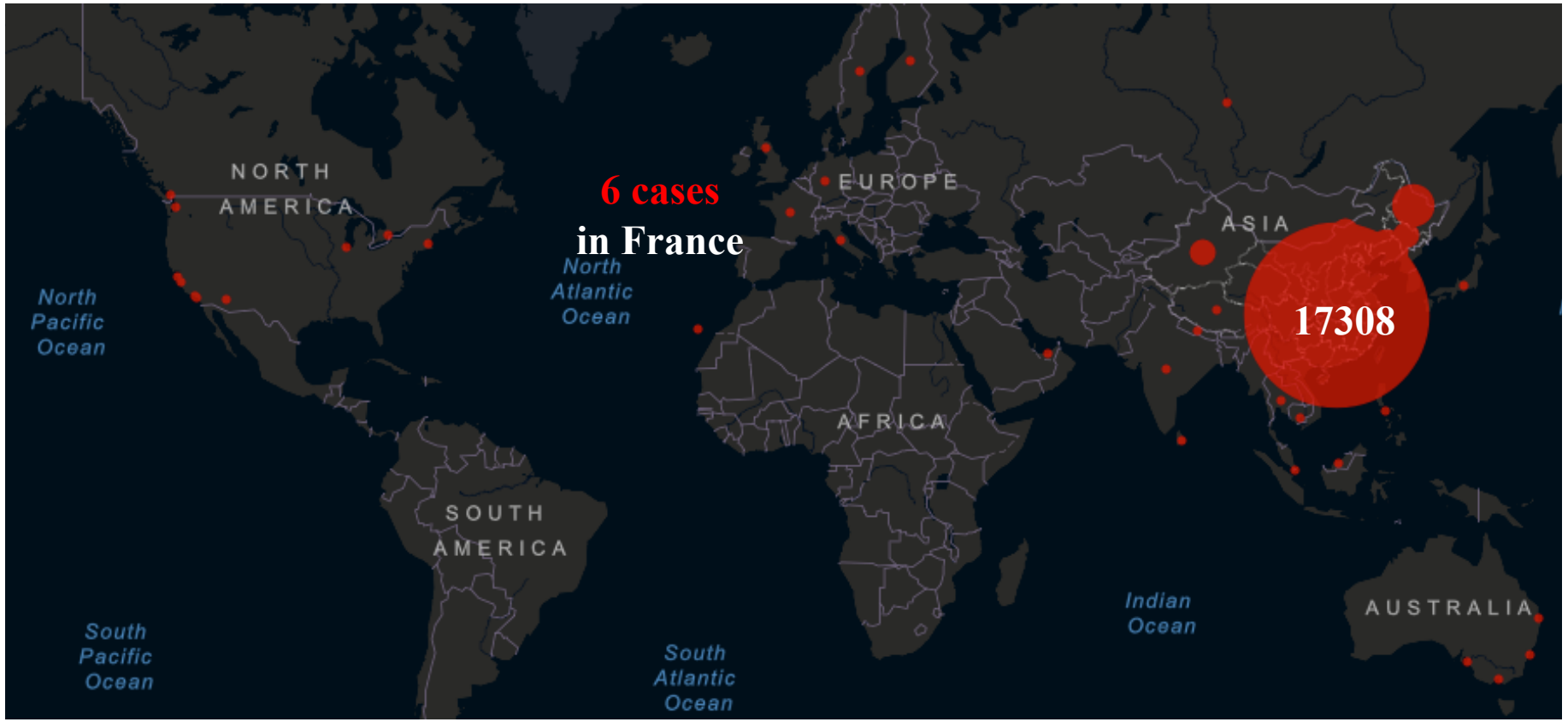
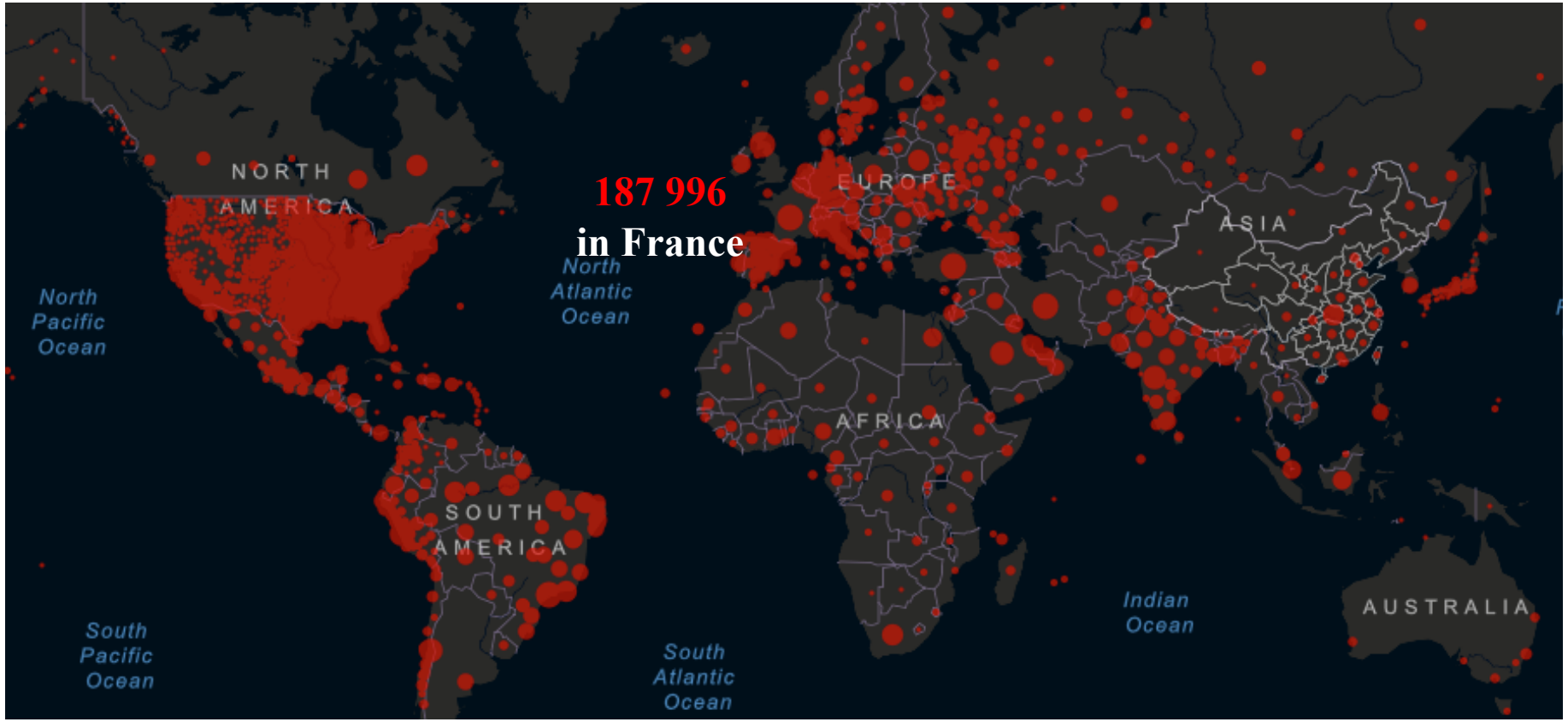
No product promotion should be inferred.

Epidemiology of COVID-19, February 3

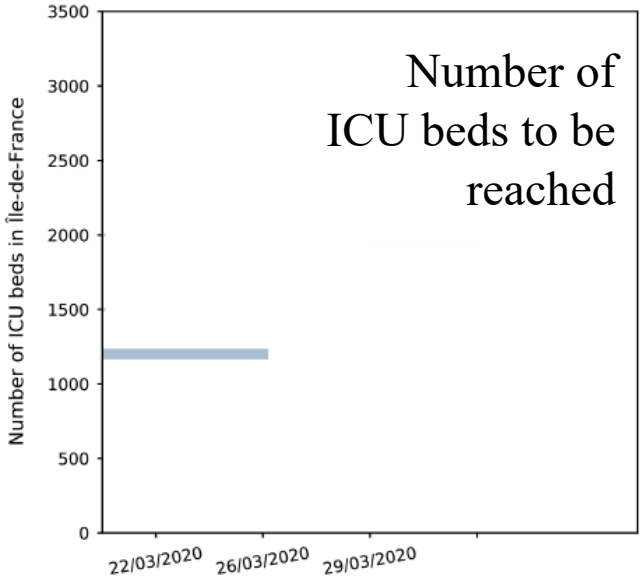


Epidemiology of COVID-19, June 10 = 7,302,391 cases



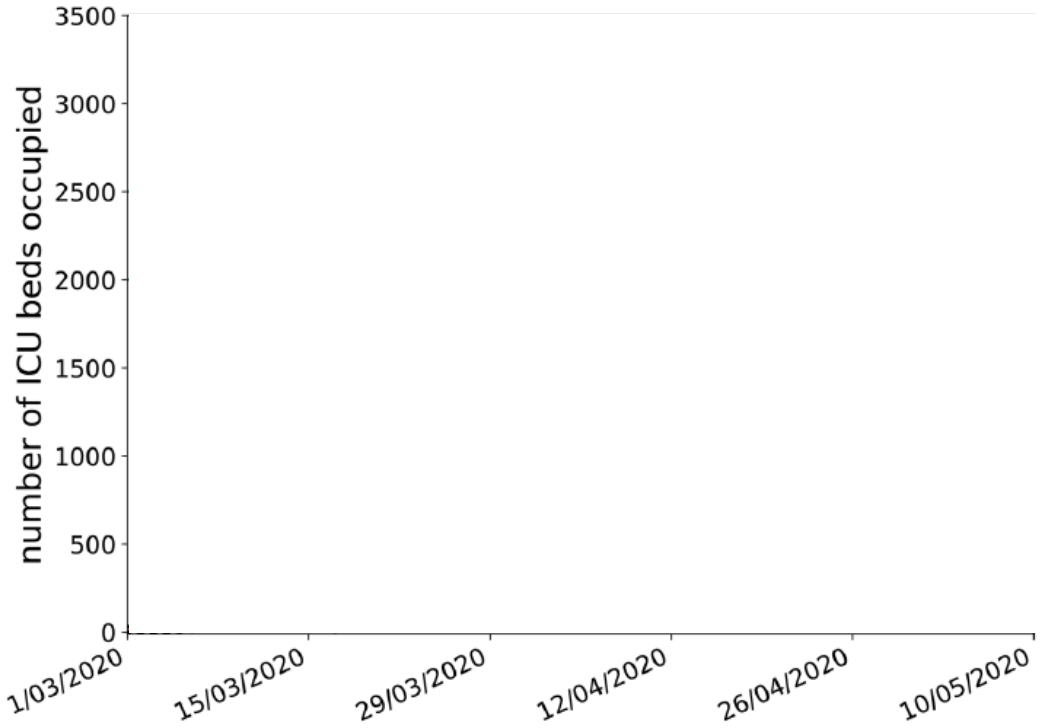
COVID-19: Objectives of Lockdown

- Reduce the number of cases
- Avoid intensive care units « overflow »



Di Domenico L, et al. *BMC Med*. 2020;18(1):240.

COVID-19: Impact of Lockdown



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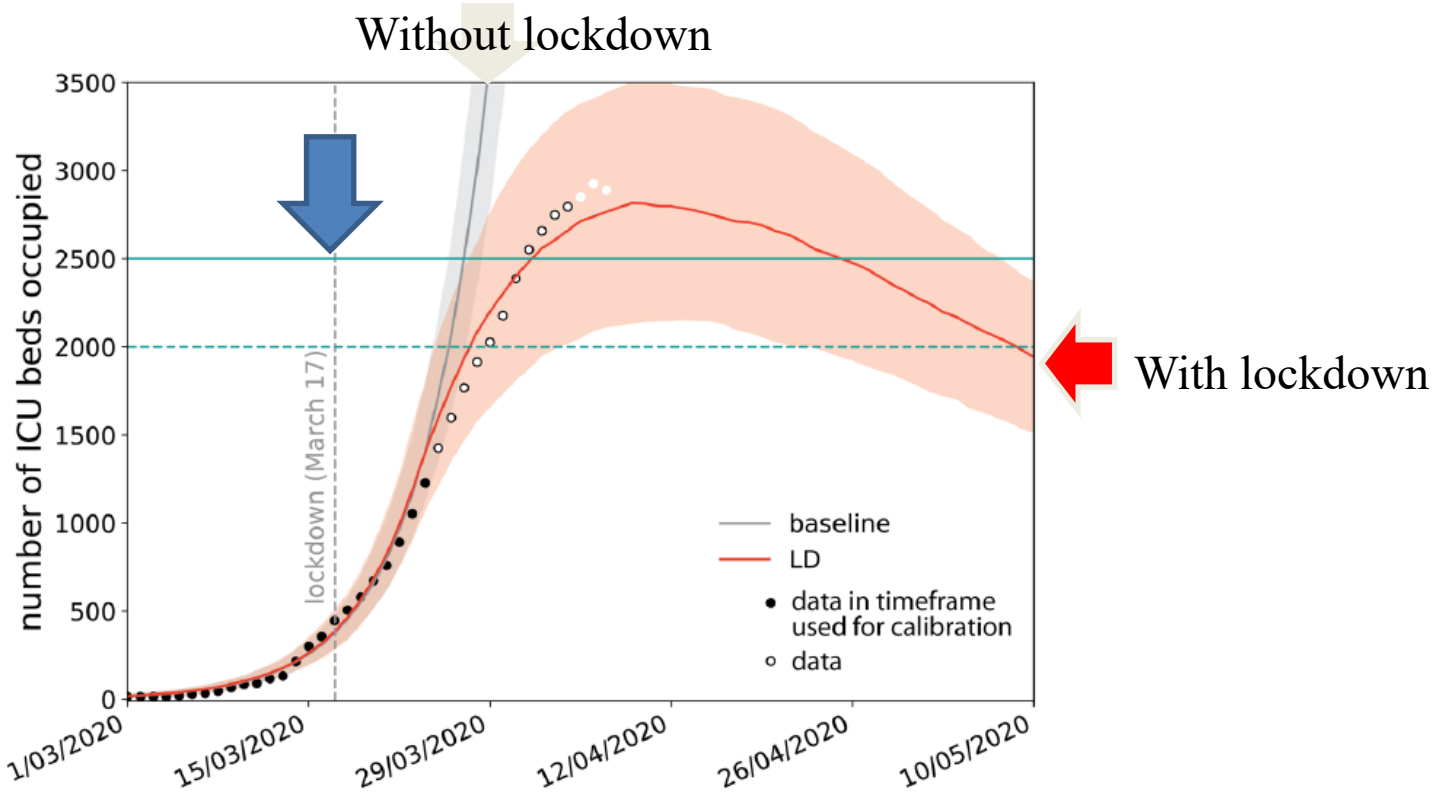
COVID-19: Impact of Lockdown



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March to May 2020, Global Confinement in France

- Major stress to the public health system in Paris
  - Steep increase in acute respiratory distress… ICU
  - Steep increase in COVID + admitted through the ER
- Crisis task force with daily meeting and reports
  - Re-allocation of H beds for COVID+ units
  - Opening new ICU beds in all possible spaces
  - Total freezing of all non-urgent surgery
  - Many elective patients postponed
- Most likely a « loss of chance » for other disease
  - Acute MI, stroke
  - Unknown cancer because of reduced screening

N of ICU Beds (Paris)

- Normal conditions
  - Pompidou 41
  - APHP total 495

- During April Pic
  - Pompidou 99 (2.4 times)
  - APHP total 1105 (2.2 times)

How to Manage IO?

- Instructions to dramatically reduce the OR time including IR and IO
- Maintained urgent interventions
- Reorganize patient workflow

Société Francaise de Radiologie Guidelines

- In COVID+ patients
  - Limitation to essential intervention
- In all patients
  - Prioritize outpatients
  - Postpone non-urgent IR
    - UFE, PAE, varicocele, claudication, chronic V obstruction, pelvic congestion…
  - Maintain
    - IO
      - ablation, TACE, abscess drainage
      - pics and ports
      - supportive care
    - Emergency
      - embolization for bleeding
      - CLI

https://ebulletin.radiologie.fr/actualites-covid-19/gestion-patients-radiologie-interventionnelle-deconfinement-du-11-mai

What Precautions Are You Taking for COVID-Positive Patients?

- Direct from ward to angio room
- Reduces IR manpower
- FP 5 and protective shield
- Only one circulating nurse and one tech staffing the control room
- Protocol for dressing and undressing
- Defining days with team A and days with team B

3D-printed face protective shield in interventional radiology: Evaluation of an immediate solution in the era of COVID-19 pandemic

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1. Photograph shows interventional radiologist wearing the 3D-printed
ve face shield.

Shortage in Surgical Mask and FFP5

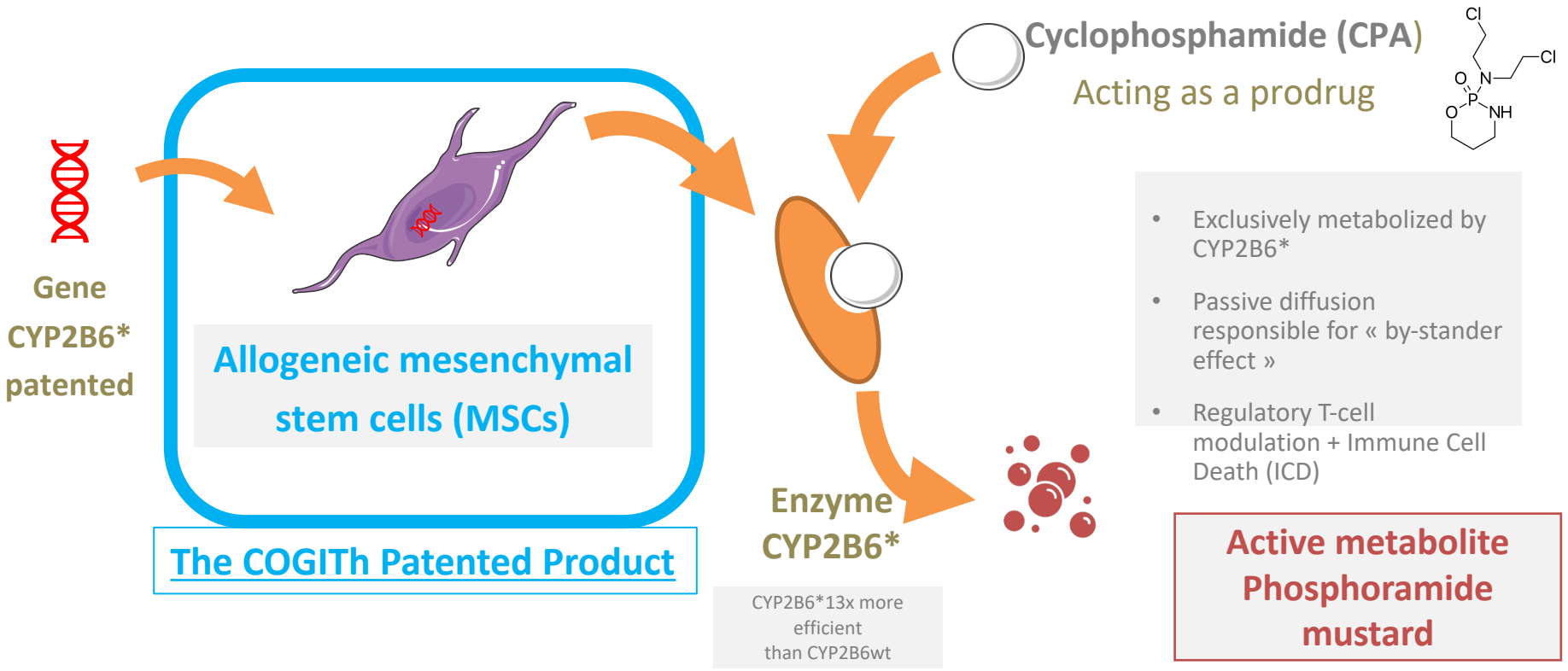
- Preparing 3D-printed protective shield
- www.3D4care.org
- Prospective evaluation of operator comfort

Results

- Intervention was 59 +_ 58 min
- The shield was used several times (2 +_ 1.7 times [1-8 times].
- The mean ability to perform the assigned intervention as usual was 1.7 +_ 0 .8 [1-4]
- The mean visual tolerance was 1.6 +_ 0.7 [1-4]
- The mean MSK tolerability was 1.4 +_ 0.7 [1-3]

Our Best WIP?

COGITh Patented Gene-directed Enzyme Prodrug Therapy

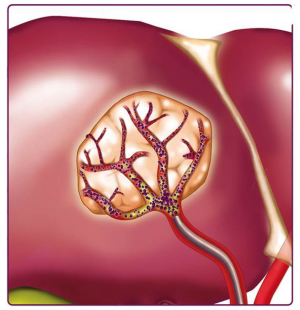


How to Optimally Deliver iMSC in Hepatic Tumors?

- Per os: ☹((no absorption
- IV: : ☹((pulmonary trapping
- Intratumoral : ☹((poor diffusion

- **Intra-arterial injection: Optimal option**
  (Usual practice in HCC - 80% of chemo treated pts)

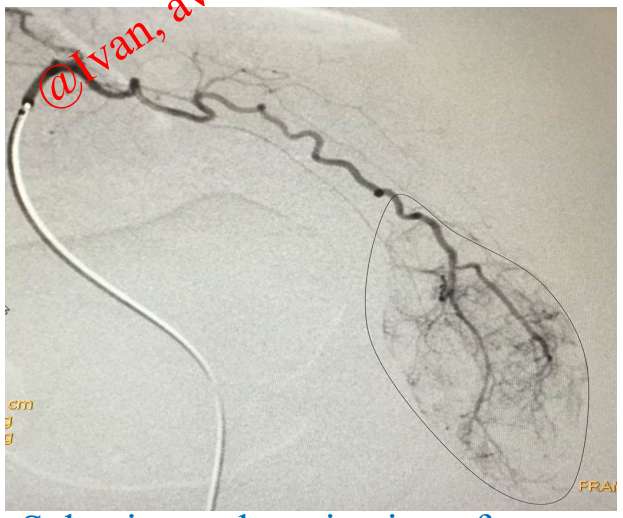
  Elective route to reach hepatic tumors
  - *Tumors are vascularized by the hepatic artery*
  - *Selective catheterization allows safe and accurate delivery*



EFFILAP II study: VX2 Rabbit Model / COGITH Trans–Arterial Admin. vs. cTACE (Chemoembolization) vs. CPA

"Pivotal Pre-Clinical" Trial in Reference Model

@Ivan, avec legendes



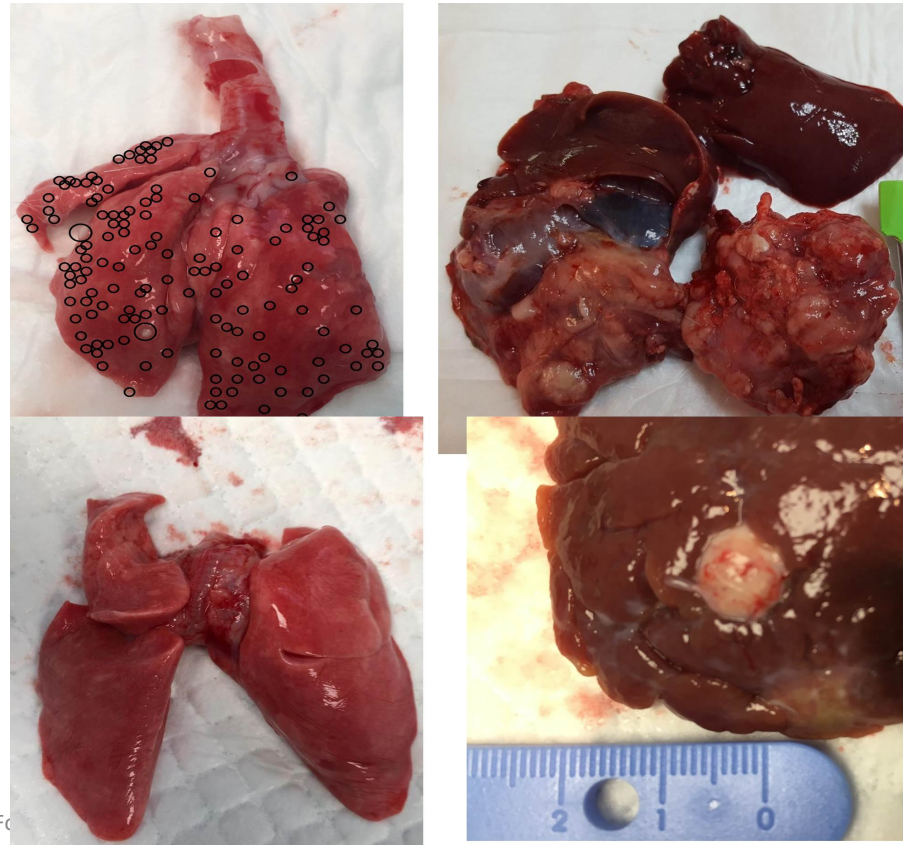
Selective catheterization of tumor arterial feeder and injection of COGITh in a VX2 liver tumor model

cTACE

Major progression & metastatic spread

COGITh

Tumoral scare & no metastatic spread



Conclusion

- COVID put the public health system under a lot of pressure
- Agressive policy and managment of IR workflow is mandatory
- Sometimes an opportunity to transfer to less invasive interventions to avoid surgery (example liver ablation)

- Hope we can all share a good beer soon