

Personalized medicine in head and neck cancer

CONCLUSION AND CLINICAL PERSPECTIVES

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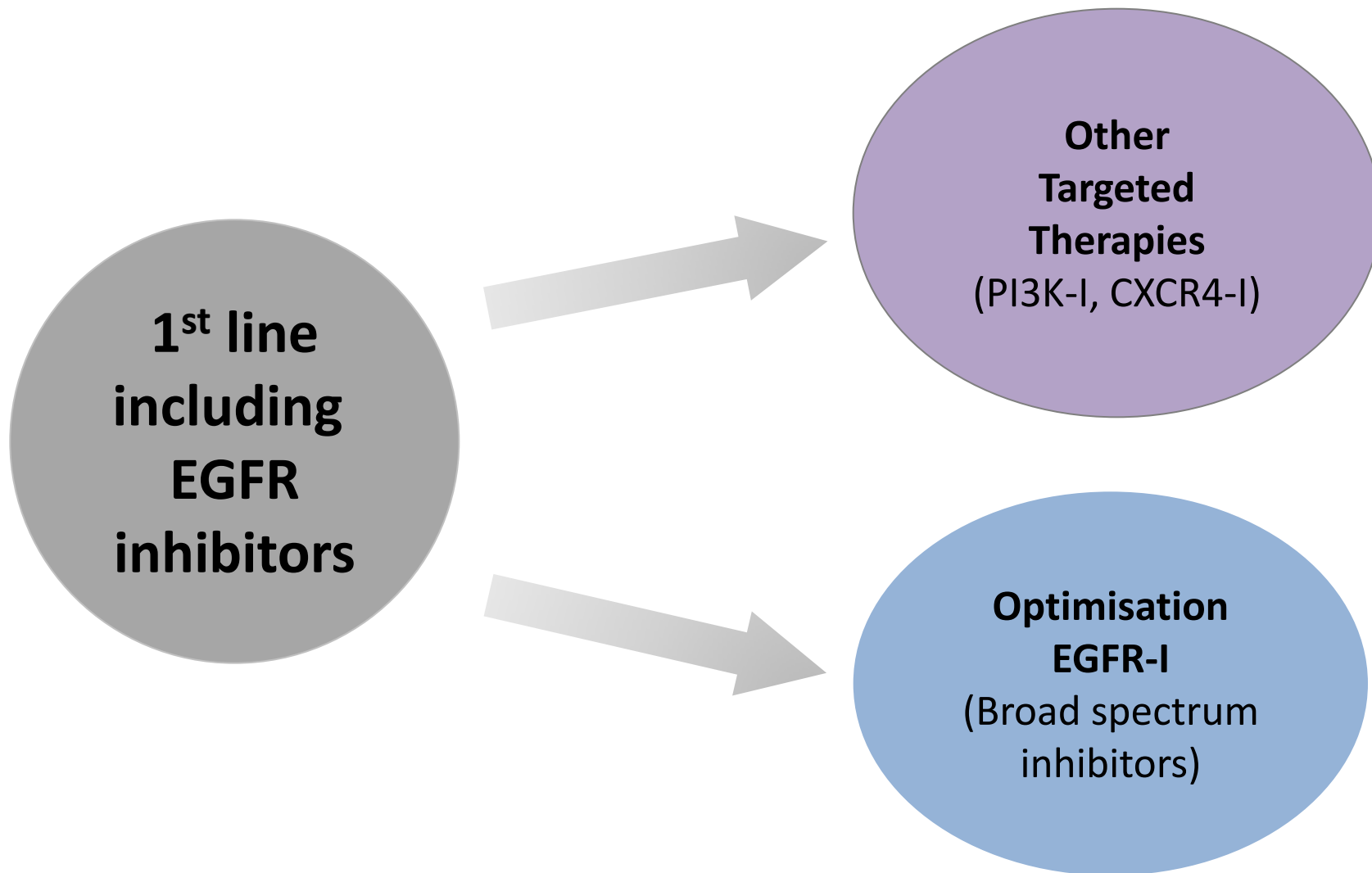
Medical Oncology

Beaujon University Hospital, France

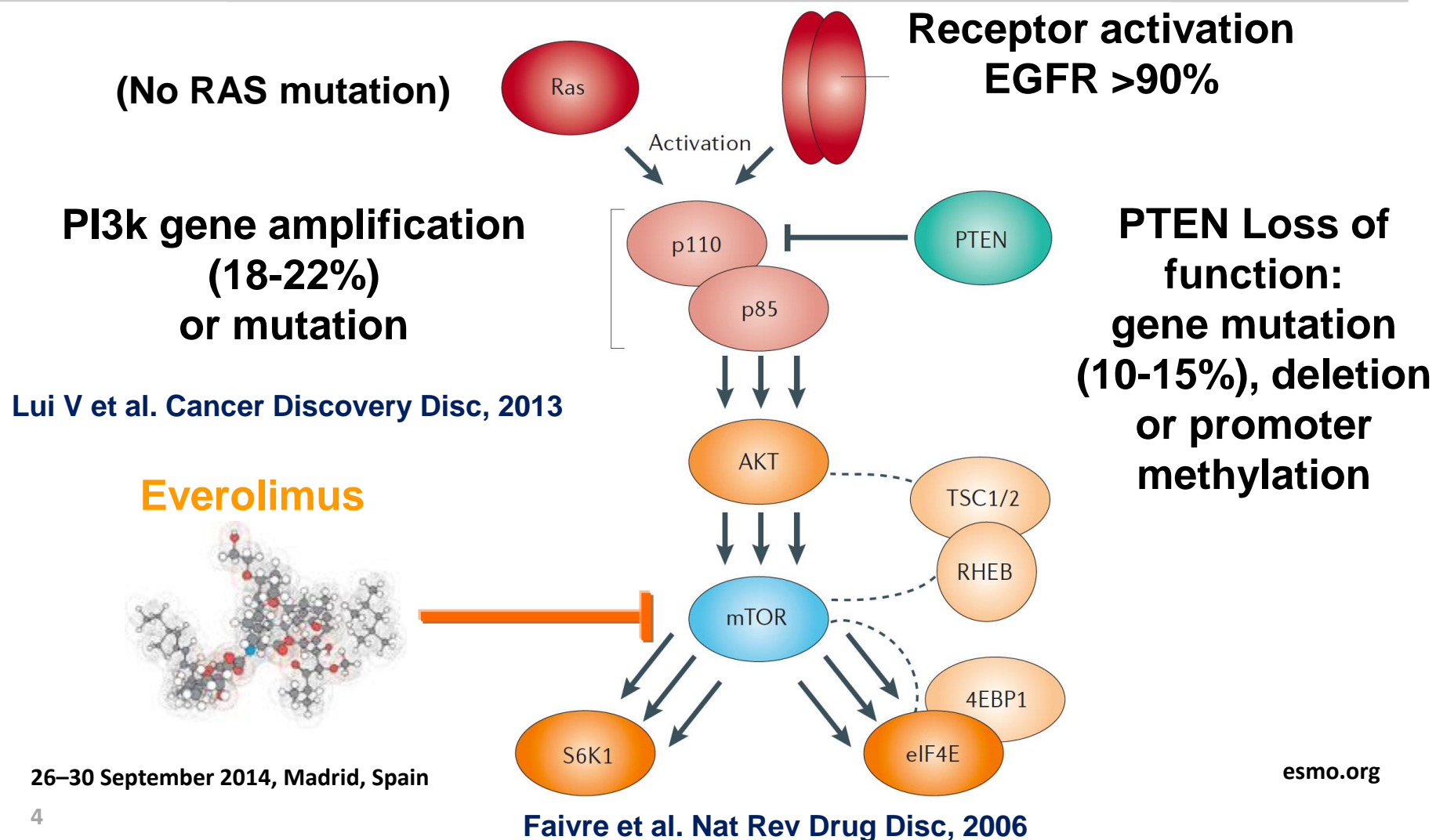
Disclosures

- **SF:** Honoraria from Merck, Novartis.

Trials of 2e line for advanced HNSCC in ALL COMERS...

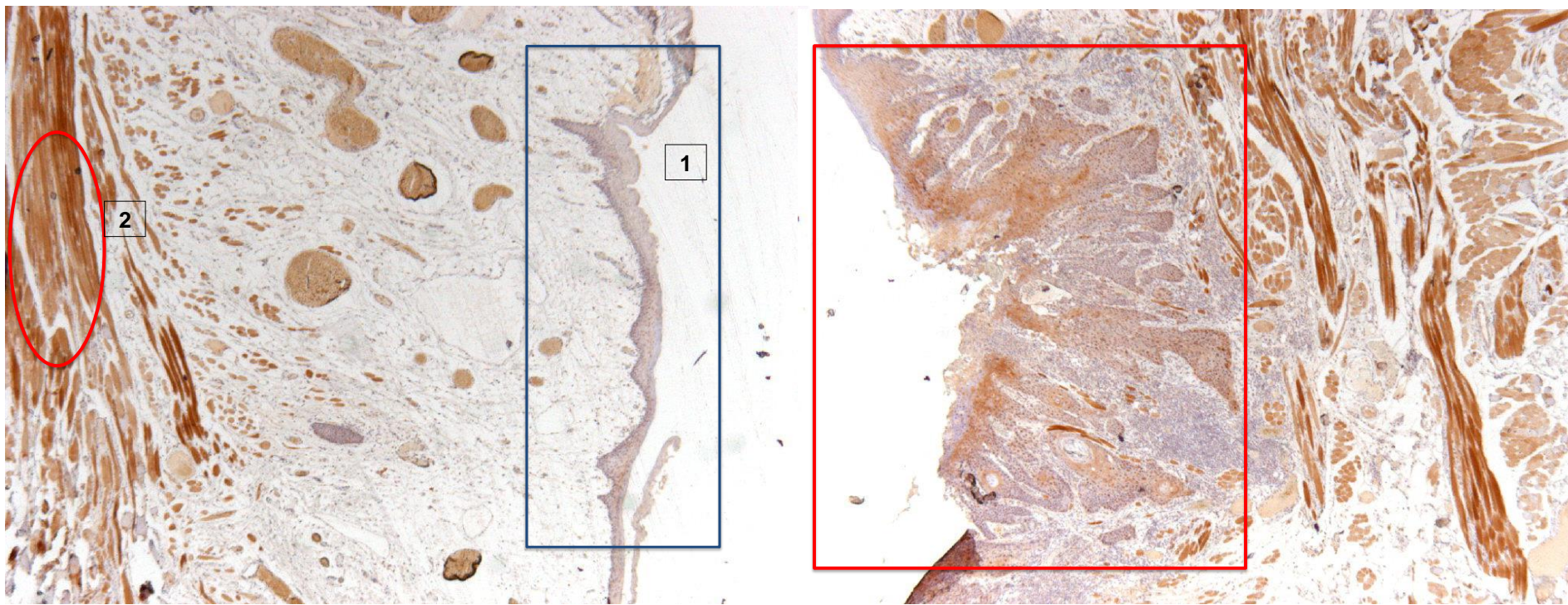


The PI3K/mTOR pathway is frequently activated in HNSCC



Prognostic value of the chemokine receptor CXCR4 and epithelial-to-mesenchymal transition in patients with squamous cell carcinoma of the mobile tongue ☆

CXCR4 Expression (IHC)



Deciphering ACC biology using molecular genetics



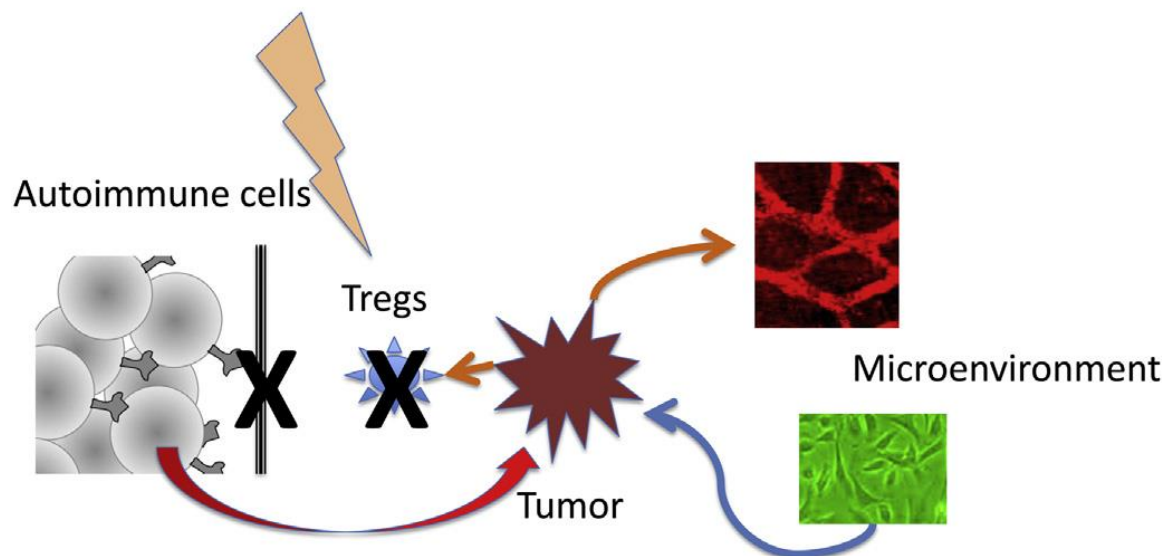
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esmo.org

Active immunotherapy for head and neck cancers: Induction of T cell response

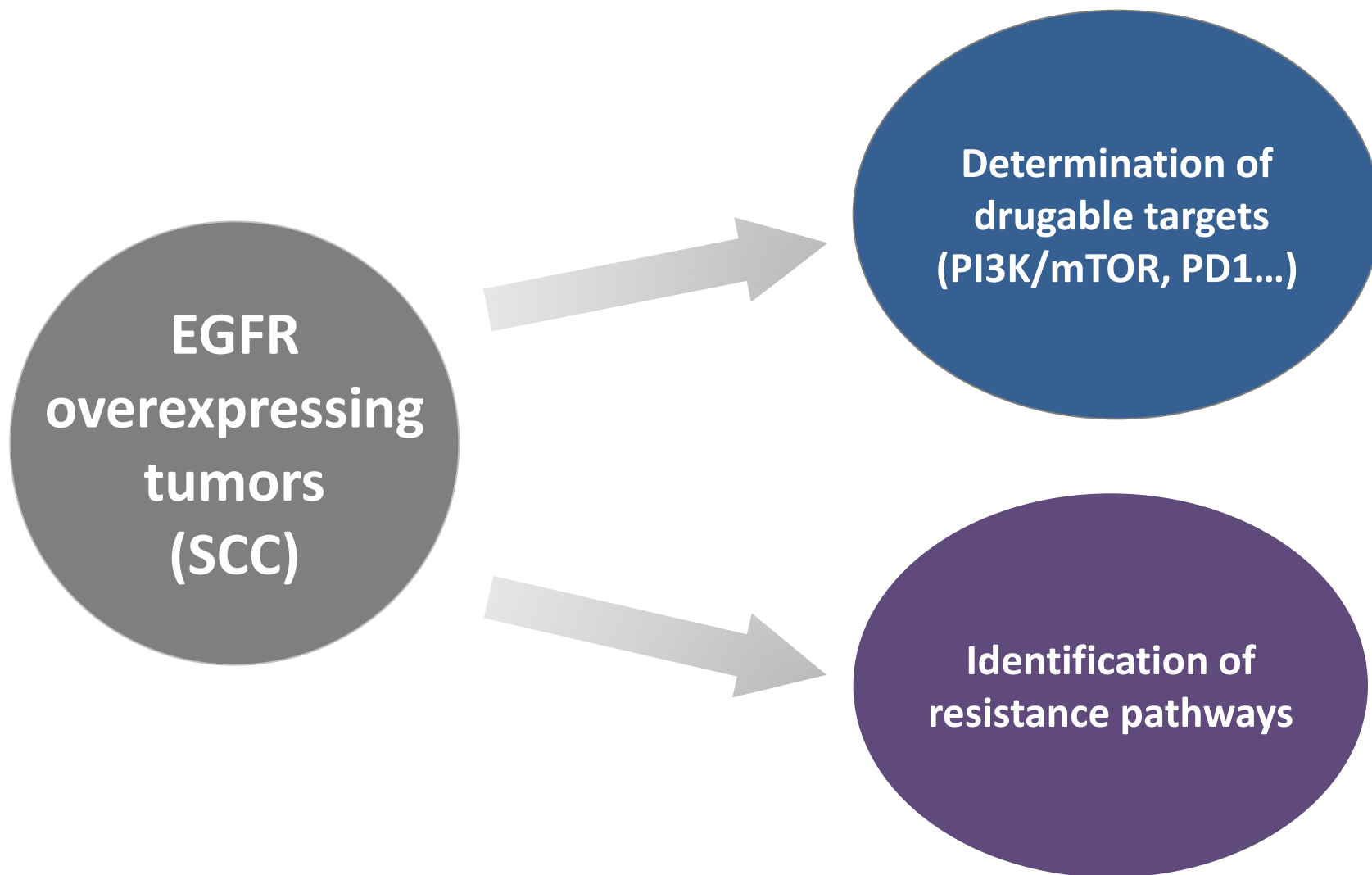
Tumor immunotherapy:

Antibodies to endogenous suppressor pathways
(anti-PD1, anti-CTLR4) block Tregs & unleash autoimmune
anti-tumor effector immunity.

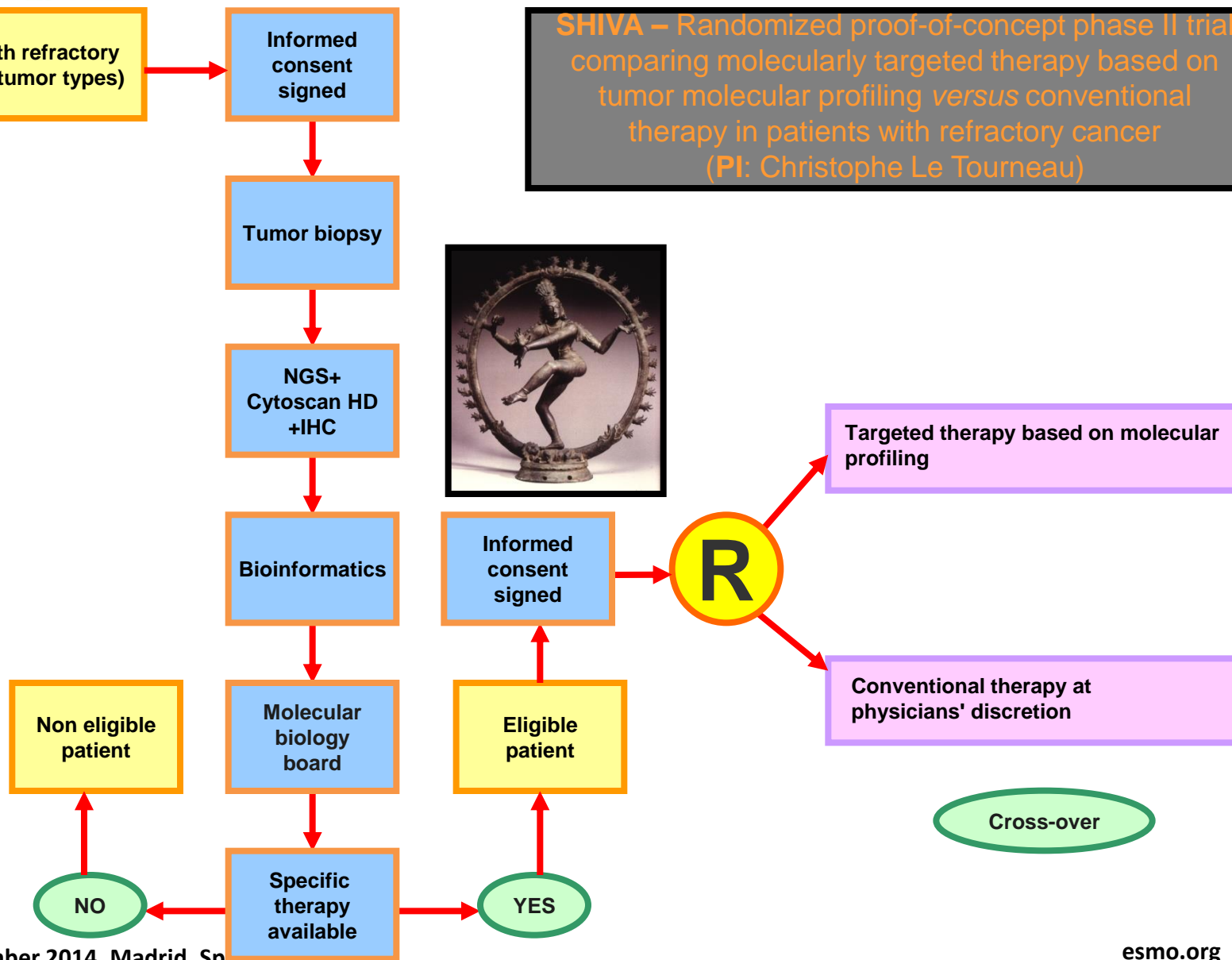


Cohen IR. Journal of Autoimmunity 2014

From all comers... to PERSONALIZED therapeutic approach



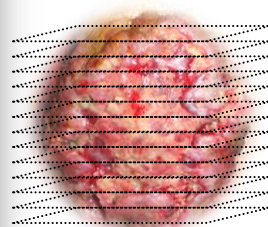
SHIVA – Randomized proof-of-concept phase II trial comparing molecularly targeted therapy based on tumor molecular profiling *versus* conventional therapy in patients with refractory cancer
(PI: Christophe Le Tourneau)



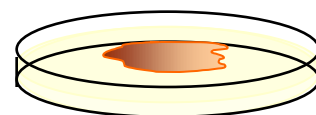
Ex Vivo evaluation of drugs in HNSCC



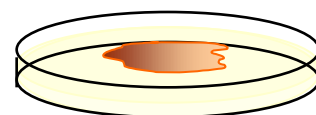
Biopsy under local
anesthesia



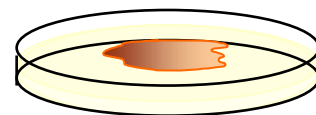
Fresh tumor-tissue cultured for 48h
To test targeted therapies



Control

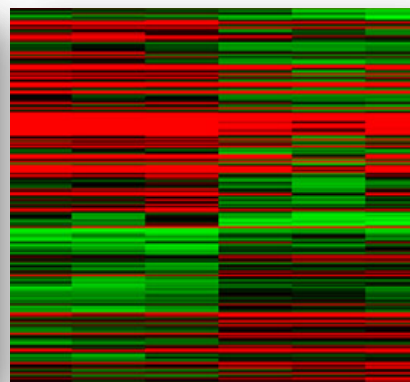
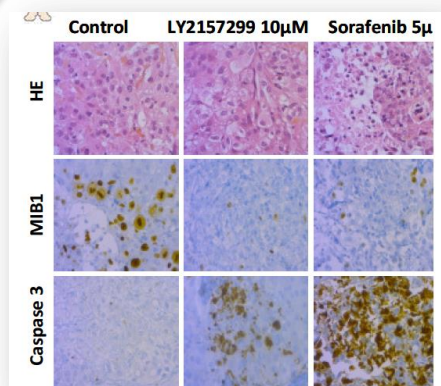
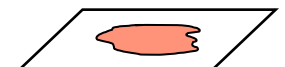
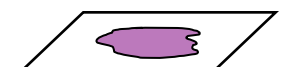
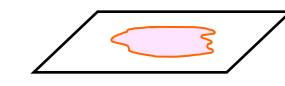


Drug A



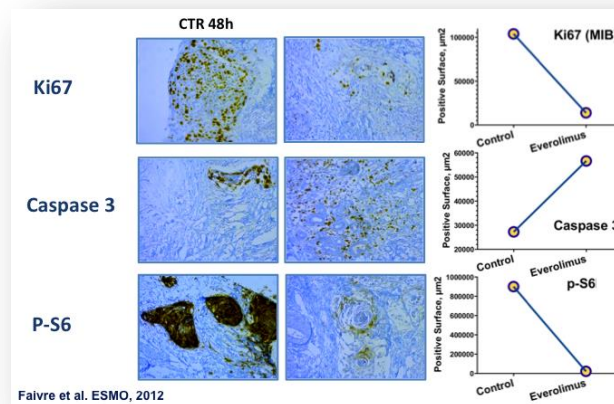
Drug B

Biomarkers analysis by
immunofluorescence



Intelligence Medicine Protein and nucleic acid expressions

26–30 September 2014, Madrid, Spain



Chemo-biogram

Effects of drugs on tissue biomarkers esmo.org

Conclusions

- ✓ New biological techniques allow better characterization of HN cancers
- ✓ Several targets (PI3K/mTOR, PD1) are currently emerging as promising to improve therapeutic options
- ✓ Modern design of clinical trials are warranted to include tumor biological profile
- ✓ A real breakthrough will result from testing new drugs in selected HN cancer patient subpopulations