

PSC and PBC Patient Meeting

January 21, 2017

University of California Davis

Genome and Biomedical Sciences Building

Agenda

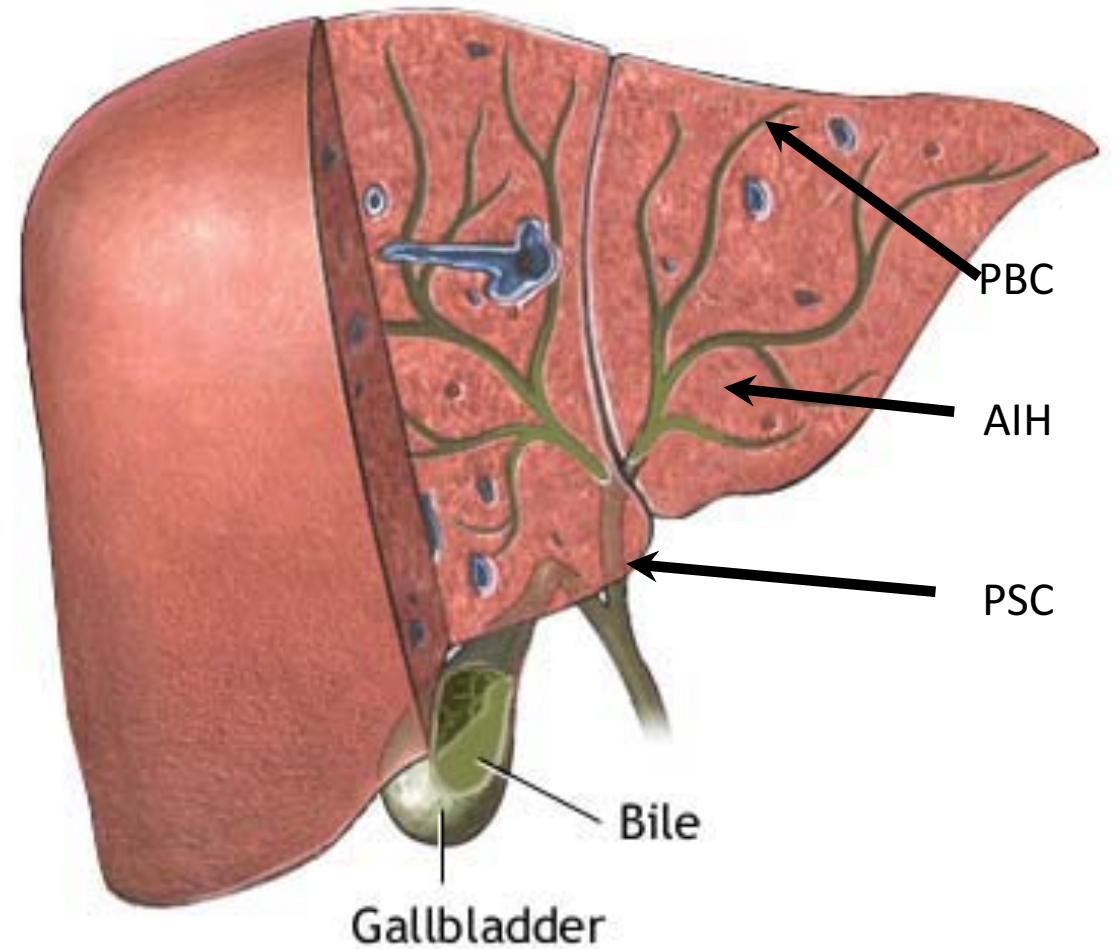
- PSC and PBC Basics
- Current Treatments for PBC
- Current Treatments for PSC
- Drugs in Clinical Trials for PSC and PBC

Primary _____ Cholangitis

- **Primary** = No underlying cause
- **Biliary** = Involving the bile ducts
- **Cholangitis** = Inflammation of the bile ducts
- *Cirrhosis = end-stage of liver disease*
- **Primary** = No underlying cause
- **Sclerosing** = hardening of tissue
- **Cholangitis** = Inflammation of the bile ducts

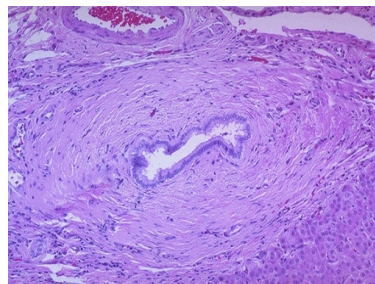
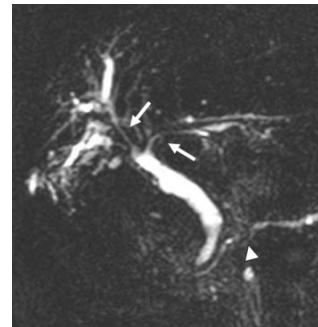
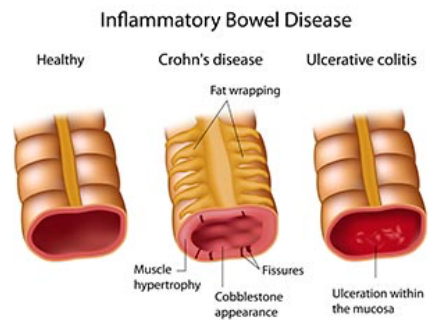
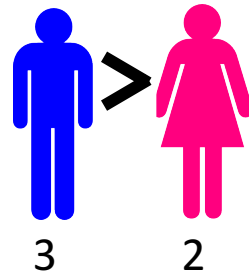
PSC and PBC Basics

- PSC and PBC are autoimmune diseases that attack the bile ducts
- PBC targets the small bile ducts
- PSC targets the large bile ducts

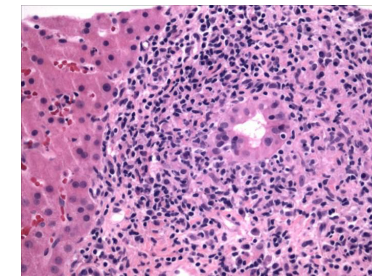
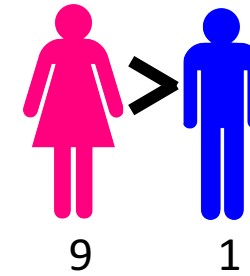


PSC and PBC Basics

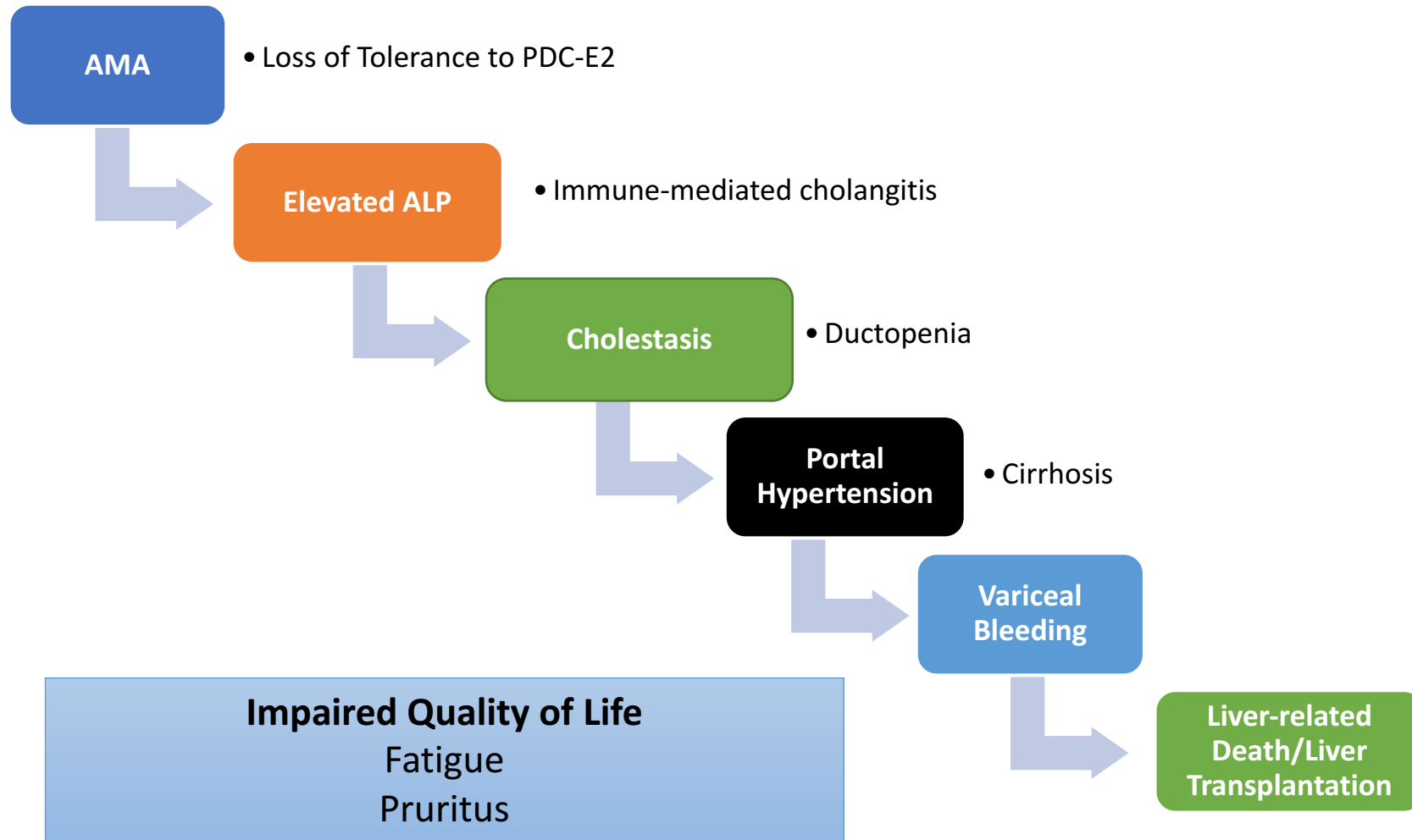
PSC



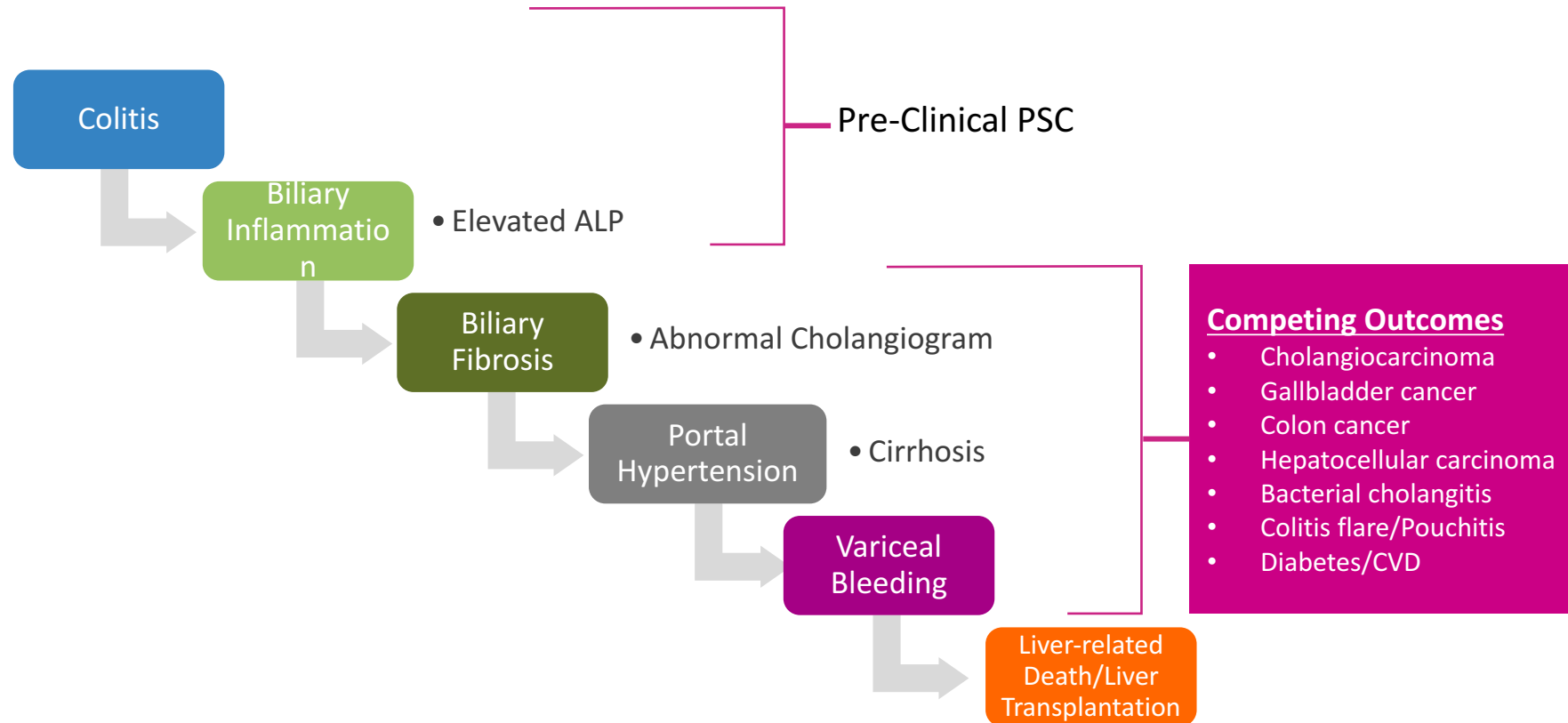
PBC



PBC Clinical Endpoints

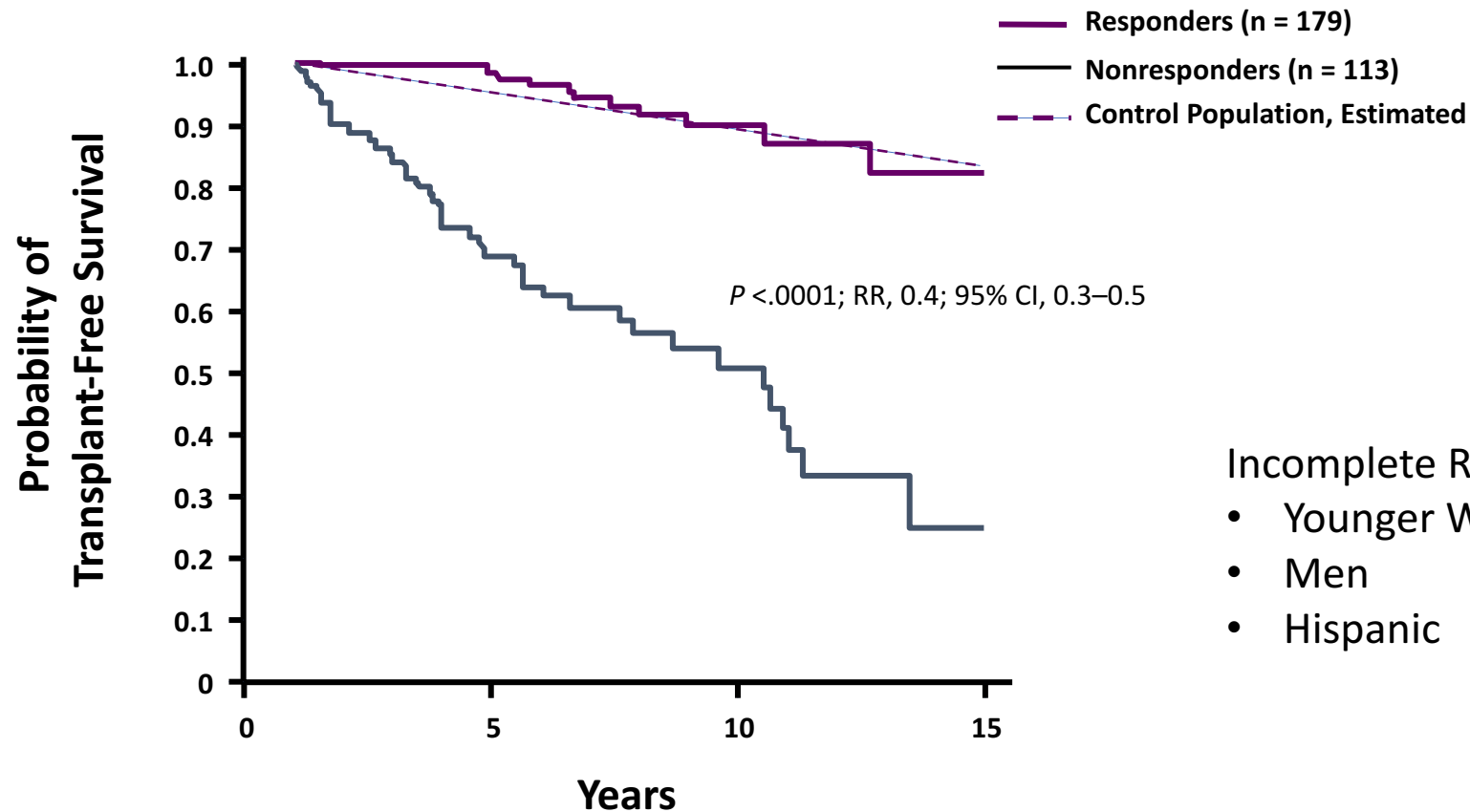


NATURAL HISTORY OF PSC



PBC: Biochemical Response to Urso at 1 Year

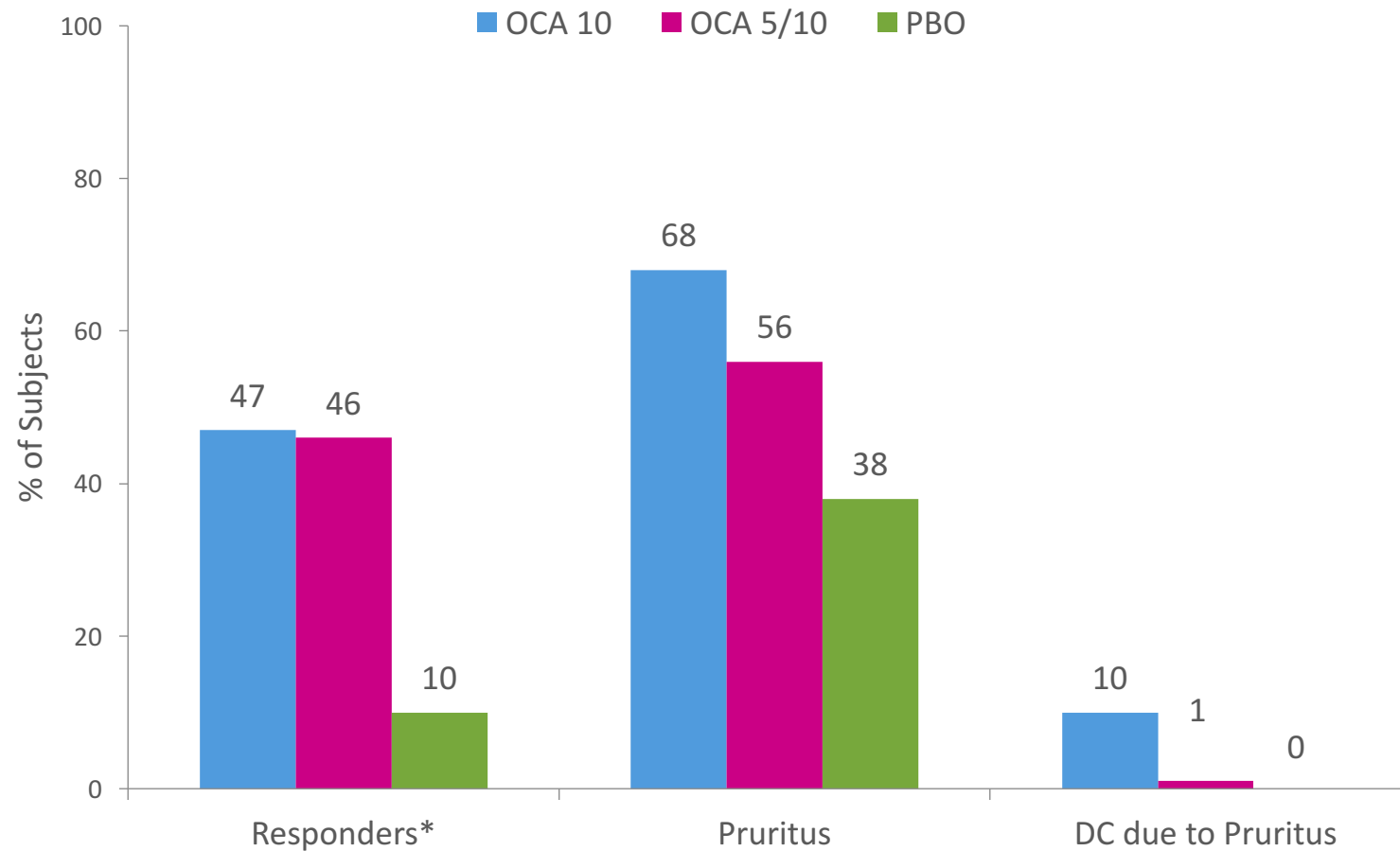
- Lack of Complete Biochemical Response Predicts Disease Progression



Incomplete Responders are more to be:

- Younger Women
- Men
- Hispanic

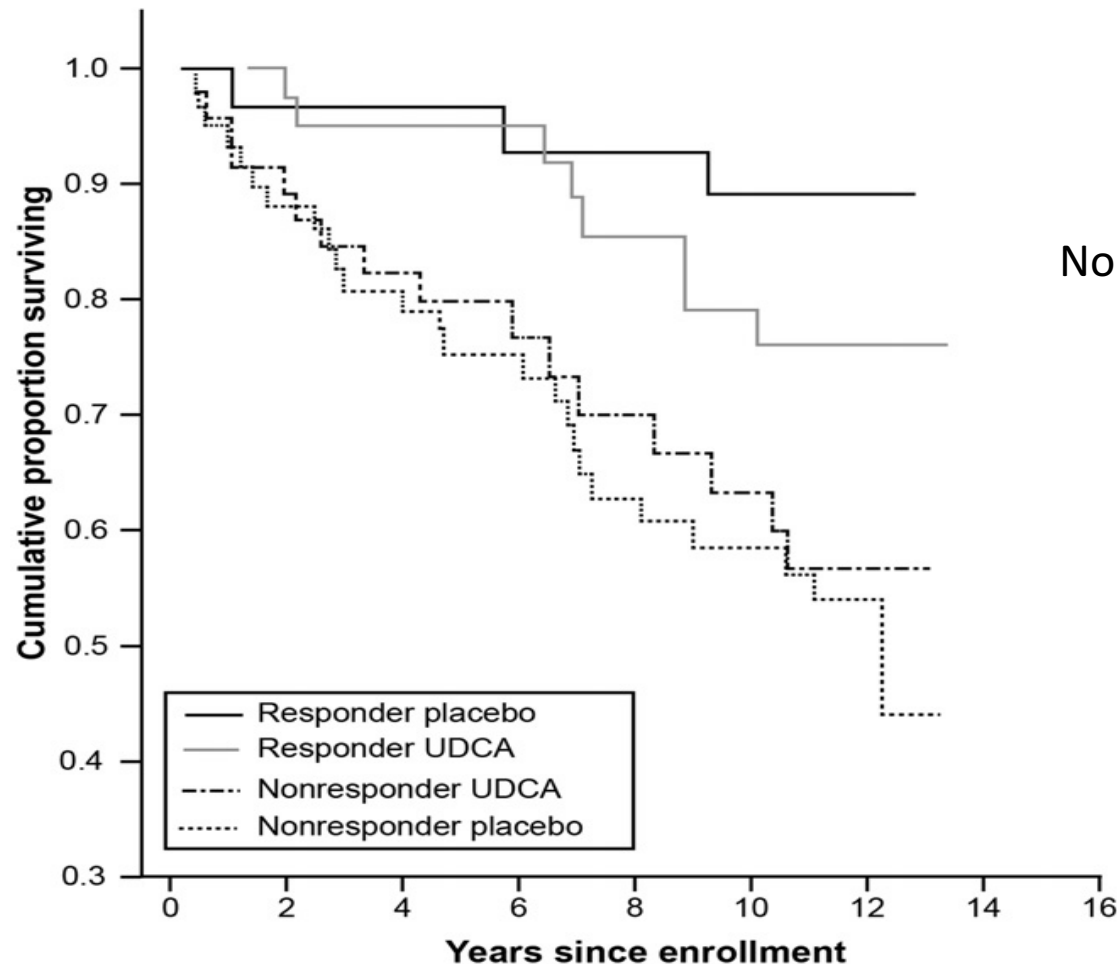
Obeticholic Acid in PBC (POISE)



*Responders were defined as patients with ALP <1.67xULN, ≥15% ALP reduction, and normal bilirubin

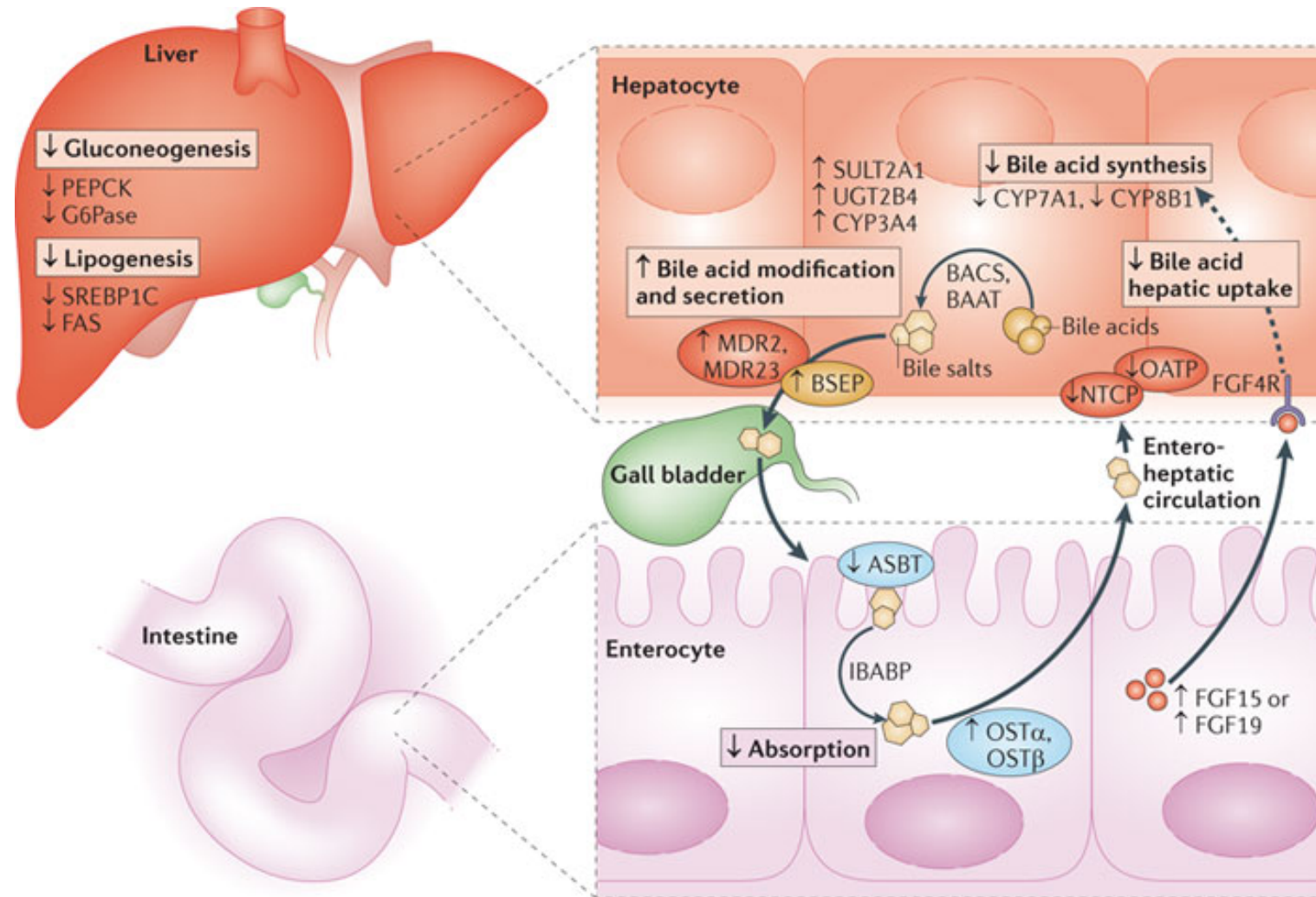
PSC: Biochemical Response to Urso

- Normal Alkaline Phosphatase Predicts Better Prognosis



Normalization can be spontaneous or from Urso

Urso and Drugs Targeting Bile Acids



Drug Pipeline for PBC

Bile Acid Based Therapies	Phase of Development
GS-9674 (Gilead)	2
NGM282 (NGM Biopharmaceuticals)	2
LJN 452 (Novartis Pharmaceuticals)	2
MBX-8025 (CymaBay)	2
Intestinal Apical Sodium Bile Acid Transport (iASBT) inhibitors	
SHP625 (LUM001; Shire) <i>Negative Results</i>	2
GSK2330672 (GlaxoSmithKline)	2
A4250 (Albireo Pharma)	2
Immune-based Therapies	
Budesonide (Falk)	2
Abatacept (BMS)	2
FFP104 (FFPharma)	2
Ustekinumab (Janssen) – <i>Negative Results</i>	2

Drug Pipeline for PSC

Bile Acid Based Therapies	Phase of Development
OCA (Intercept) <i>Enrollment Completed</i>	2
GS-9674 (Gilead)	2
NGM282 (NGM Biopharmaceuticals)	2
Nor-UDCA (Falk) <i>Positive Results</i>	2
Intestinal Apical Sodium Bile Acid Transport (iASBT) inhibitors	
SHP625 (LUM001; Shire) <i>Negative Results</i>	2
Anti-Fibrotic	
Simtuzimab (Gilead) <i>Enrollment Completed</i>	2
Immune-based Therapies	
Cenicriviroc (Tobira)	2
Vancomycin (Stanford)	2
FMT (Mass General)	2

Opportunities for PSC and PBC Clinical Trials

- Investigator
Christopher L. Bowlus, MD, Division of
Gastroenterology and Hepatology, UC Davis
Medical Center
- Purpose of the research
Development of New Therapies for PSC and
PBC
- Participation benefits
No-cost health examination, lab tests
- Location and Contact
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