

Improving life for advanced liver cancer (HCC) patients  
Fostrox – The first oral, liver-targeted treatment for advanced HCC

**MEDIVIR**





# Continued progress



Right's issue enables rapid generation of randomized, comparative data to confirm benefit of fostrox combination with Lenvima



Design of planned phase 2 study strengthened by latest data in advanced HCC



Remetinostat out-license generates significant potential value upside for phase 3 ready molecule

# Medivir enters exclusive licensing agreement with Biossil, Inc. for remetinostat

## Medivir enters exclusive licensing agreement with Biossil, Inc. for remetinostat

2025-10-23

Stockholm, Sweden — Medivir AB (Nasdaq Stockholm: MVIR), a pharmaceutical company focused on developing innovative treatments for cancer in areas of high unmet medical need, announces today that it has entered into an exclusive licensing agreement, through which Biossil, Inc. will receive global, exclusive development rights for remetinostat, a clinical-stage topical HDAC inhibitor. Biossil is a Toronto-based AI-native drug developer focused on developing novel therapies for heterogeneous diseases with urgent unmet medical needs.



Positive phase 2 data in basal cell carcinoma (BCC) and cutaneous T-cell lymphoma (CTCL)



Global, exclusive, licensing agreement to develop and commercialize remetinostat



Total, potential milestone payments of approximately USD 60 million  
Mid-single digit royalties on future net sales & sub-licensing revenue share.

### Encouraging efficacy across all subtypes of BCC lesions

A bar chart titled 'Encouraging efficacy across all subtypes of BCC lesions'. The y-axis is labeled 'Percentage change' and ranges from 0% to -100% in 10% increments. A horizontal black line is drawn at the -30% mark. The x-axis represents different subtypes of BCC lesions, color-coded: Superficial (orange), Nodular (dark teal), Infiltrative (light blue), and Micronodular (pink). The chart shows that for all subtypes, the percentage change is negative, indicating a decrease. The Nodular subtype shows the most significant decrease, reaching approximately -95%. The Superficial subtype shows a decrease of approximately -85%. The Infiltrative and Micronodular subtypes show decreases of approximately -10% and -15% respectively. A bracket labeled 'Nodular' is placed above the first four bars (Superficial, Nodular, Infiltrative, Micronodular).

Subtype	Percentage change
Superficial	-85%
Nodular	-95%
Infiltrative	-10%
Micronodular	-15%



70%

Overall response rate

55%

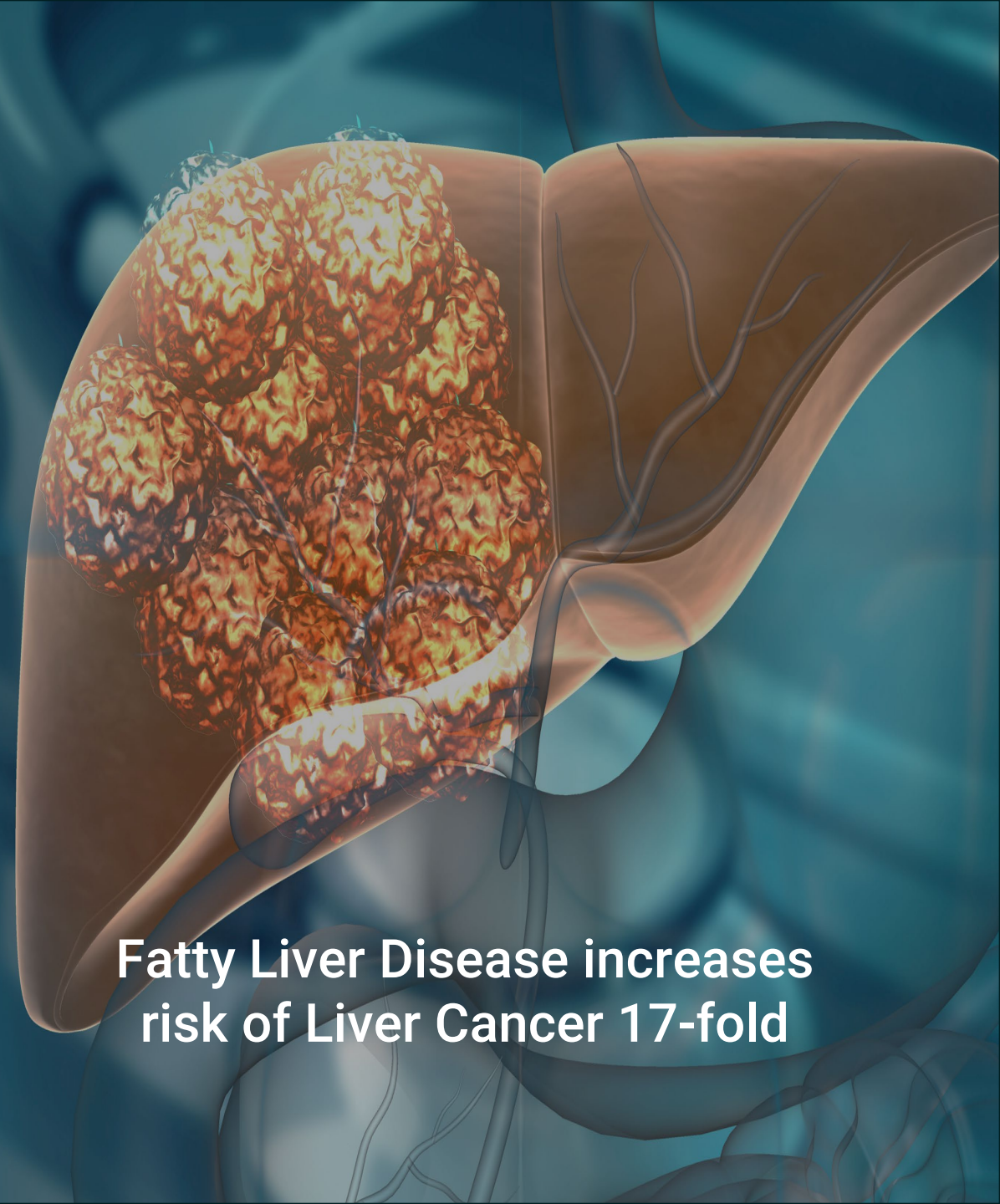
Complete pathological resolution

<sup>1</sup>J. Kilgour et al, *Clinical Cancer Research* published online 6 August 2021





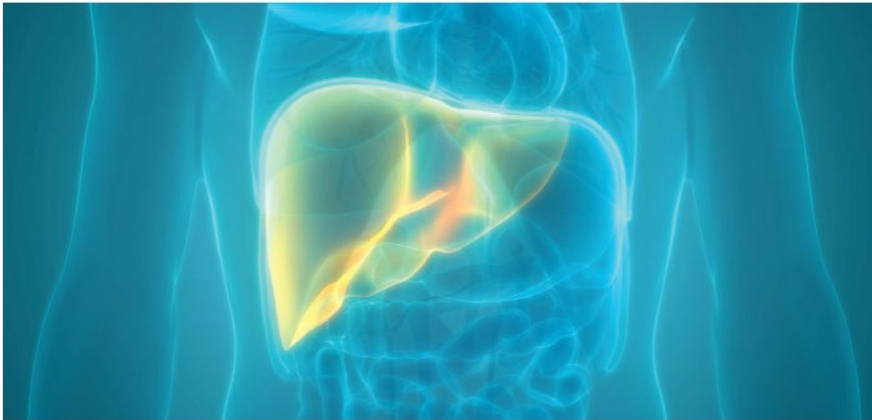
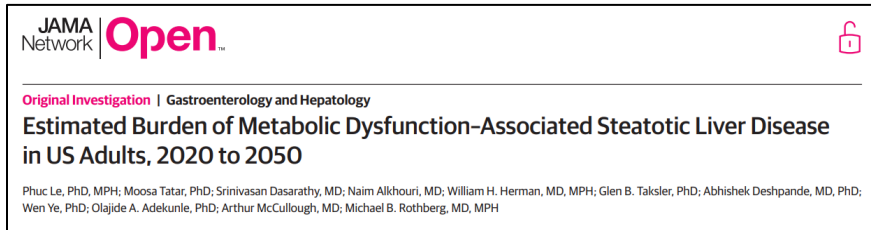
**45% of US adults are obese  
More than 25% have Fatty Liver Disease**



**Fatty Liver Disease increases  
risk of Liver Cancer 17-fold**



# Growth in Fatty Liver Disease expected to drive an alarming increase in liver cancer cases<sup>1</sup>



SCIENCE NEWS

## Fatty Liver Disease Is Expected to Skyrocket By 2050

A model predicts the rise in MASLD and MASH will drive an alarming increase in liver failure, liver cancer and liver transplants.



Fatty Liver Disease (MASLD/MASH) expected to rise dramatically over the next 30 years



The number of newly diagnosed liver cancer patients each year is expected to double

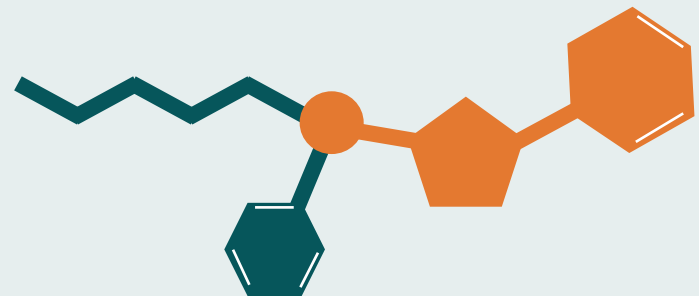


HCC market growth further spurred by more and better treatments enabling patients to be treated longer

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# Fostrox – designed to selectively kill tumor cells in the liver

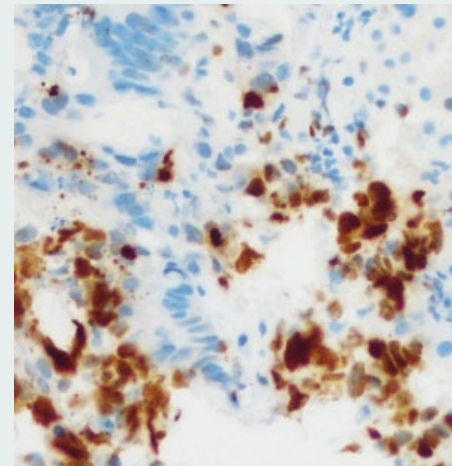
Prodrug transports inactive payload to the liver, where it is rapidly activated by liver enzymes<sup>1</sup>



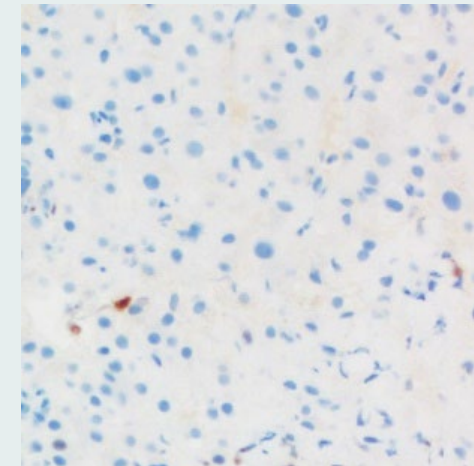
Liver-guided  
delivery –  
prodrug

Tumor-selective  
payload –  
troxacinabine

Kills tumor cells<sup>2,3,4</sup>



Spares healthy cells<sup>2,3,4</sup>



<sup>1</sup>Bethell, R. et al P-035, ILCA 2016

<sup>2</sup>Kukhanova, M et al J Biol Chem 1995

<sup>3</sup>Albertella, M. et al EASL Summit P01-05, 2018

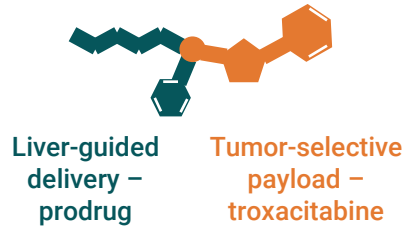
<sup>4</sup>Öberg F. et al, EASL PO-221, 2022

# Fostrox (fostroxacitabine bralpamide)

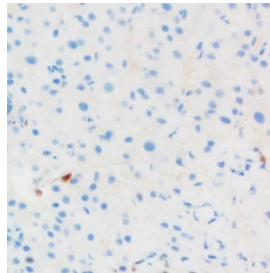
## The first oral, liver-targeted treatment tailored for HCC

Oral, liver-activated small molecule inducing DNA damage in tumor cells, sparing healthy liver cells<sup>3</sup>

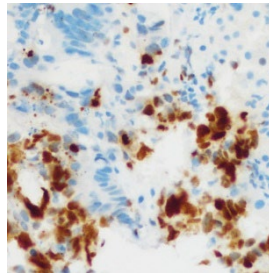
Unique, liver-targeted approach in HCC



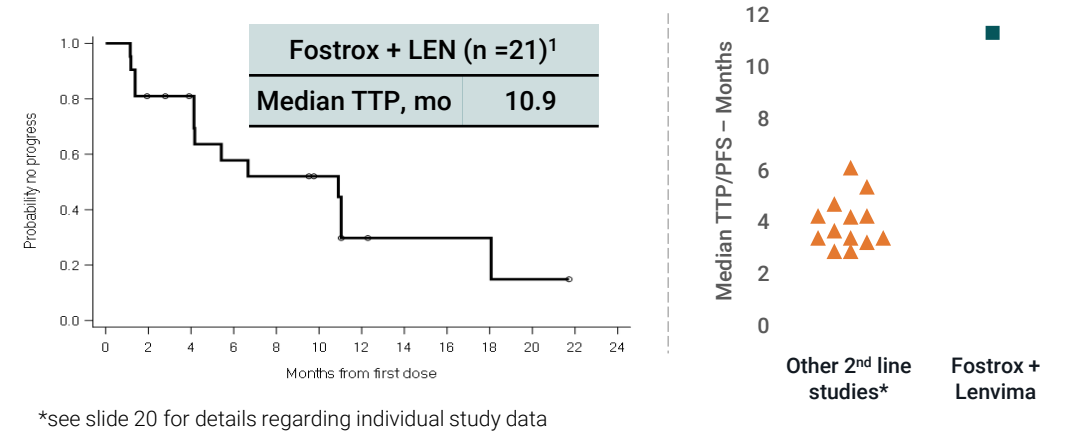
No DNA damage in healthy liver tissue



DNA damage in tumor tissue



10.9 months time to progression, substantially better than SoC<sup>1,2</sup>



Absence of effective treatment options in 2<sup>nd</sup> line enables first-to-market opportunity for fostrox + Lenvima



- No 2<sup>nd</sup> line treatments approved in advanced HCC
- FLEX-HCC Phase 2 designed to rapidly confirm comparative benefit of fostrox in combination with Lenvima

Market opportunity in 2<sup>nd</sup> line HCC >\$2.5bn, with significant upside potential

>\$2.5bn

2<sup>nd</sup> line HCC market by 2030, fastest growing cause of cancer death in US<sup>4</sup>



Significant upside in liver metastasis from other solid tumors

<sup>1</sup>Chon et al., ESMO, 2024, Poster 986

<sup>2</sup>Based on data from previous 2L phase 3 HCC studies with Stivarga, Cyramza & Cabometyx and investigator initiated prospective & retrospective 2L studies with Lenvatinib

<sup>3</sup>Evans et al ASCO GI, 2021

<sup>4</sup>Ma et al., Cancer, June 15, 2019; 2089-2098



# Medivir management team



**CEO**  
**Jens Lindberg**

- > 25 years of experience from pharmaceutical industry with focus on late-stage development & commercialization in Oncology of drugs like Tagrisso, Lynparza, Imfinzi and Iressa
- Other experience includes interim CEO for Sedana Medical AB and Director Investor Relations at AstraZeneca.
- Member of the Board of Braincool AB.



**CMO**  
**Dr. Pia Baumann**

- MD PhD with a specialist degree in medical & radiation oncology at Karolinska Institute/University hospital.
- Substantial experience in drug development in the cancer field.
- > 25 years of clinical work at Karolinska and pharmaceutical/biotech companies, including AstraZeneca, BMS, Takeda, Incyte and ARIAD



**CFO**  
**Magnus Christensen**

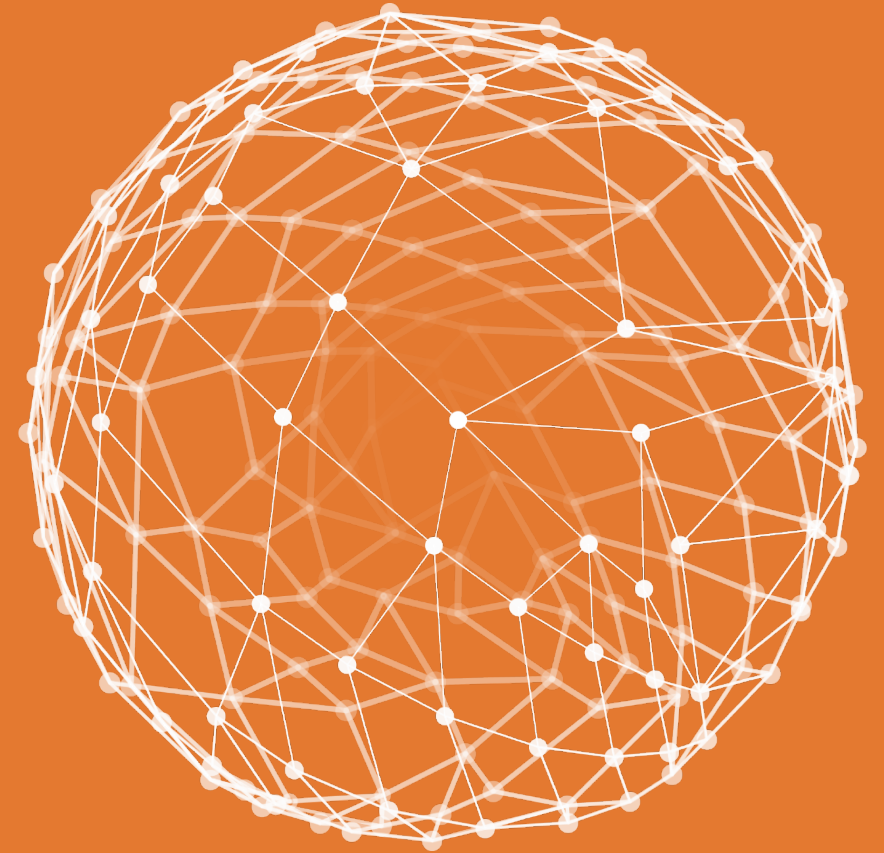
- > 25 years of experience in finance.
- Interim CEO at Medivir, May 2021-January 2022.
- Former CFO at O'Learys Trademark AB.
- Experience of working in listed-, private equity- and private companies.
- Member of the Board of PMD Device Solutions AB.



**CSO**  
**Fredrik Öberg**

- PhD in Medical Science & Adjunct professor at the Medical Faculty of Uppsala University.
- > 25 years of experience in cancer research.
- During the last 10 years focused on industrial drug discovery and development projects in oncology.
- He has published more than 50 scientific articles and holds several patents.

**First-to-market opportunity  
in 2<sup>nd</sup> line HCC market  
valued >\$2.5bn**





# Fostrox + Lenvima targets 2L population where no treatments are approved today

## Advanced HCC – Treatment Algorithm

1L

- Majority treated with IO combo
- **Tecentriq + Avastin preferred with recent data strengthening its position**

90%

IO combination

10%

Lenvatinib (or Sorafenib)

2L

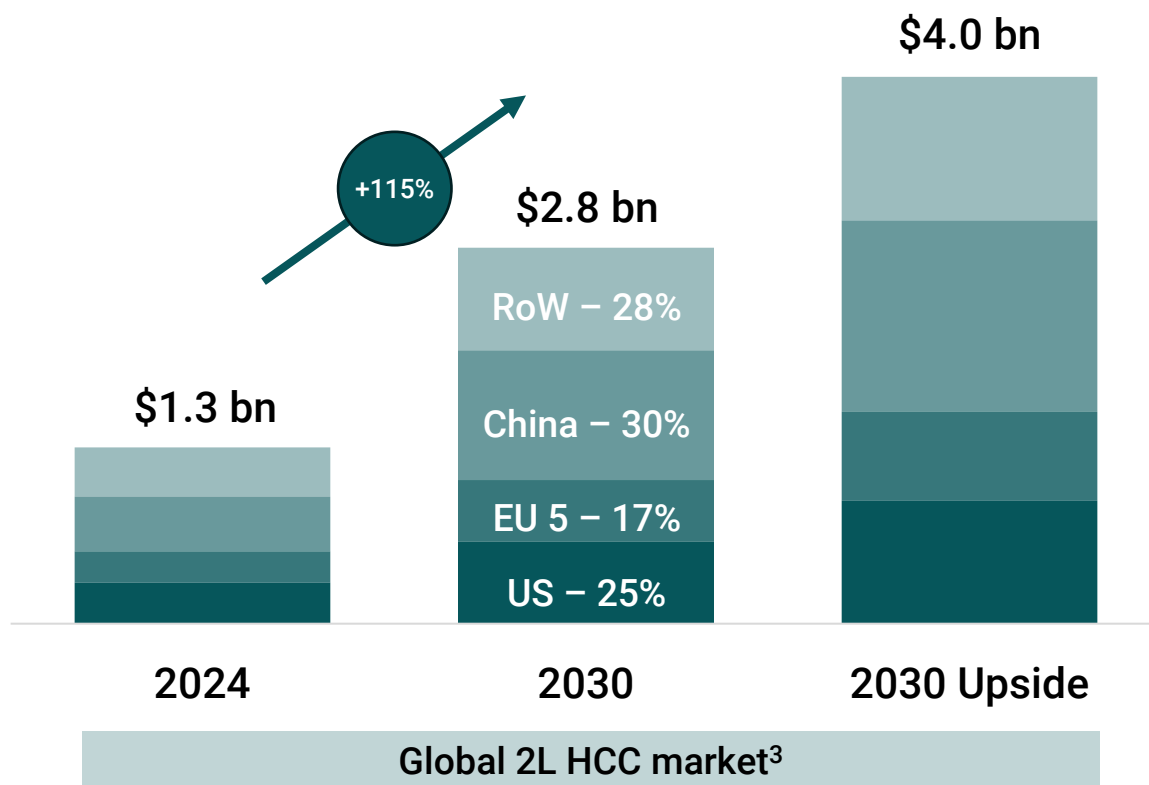
- No approved options in 2L
- Fostrox + Lenvima target population

- Data presented at ASCO & ESMO-GI confirming the promise of fostrox + lenvatinib combination

Lenvatinib/TKI  
monotherapy preferred

IO combination

## 2<sup>nd</sup> line HCC – a large and growing commercial opportunity with significant need for new treatment options<sup>3</sup>



### Growth driven by:

- HCC to increase **+122% in the US** and **+82% in China<sup>2</sup>** by 2030, caused by fatty liver disease
- With improved 1L treatment, more patients will be **fit enough for 2L, 50% → 70%**
- New, approved treatment options increase average **treatment duration to 7 months** by 2030

### 2030 Upside:

- Average treatment duration increases to 10 months based on fostrox + Lenvima<sup>®</sup> study

<sup>1</sup>Rumguy et al. Journal of Hepatology 2022

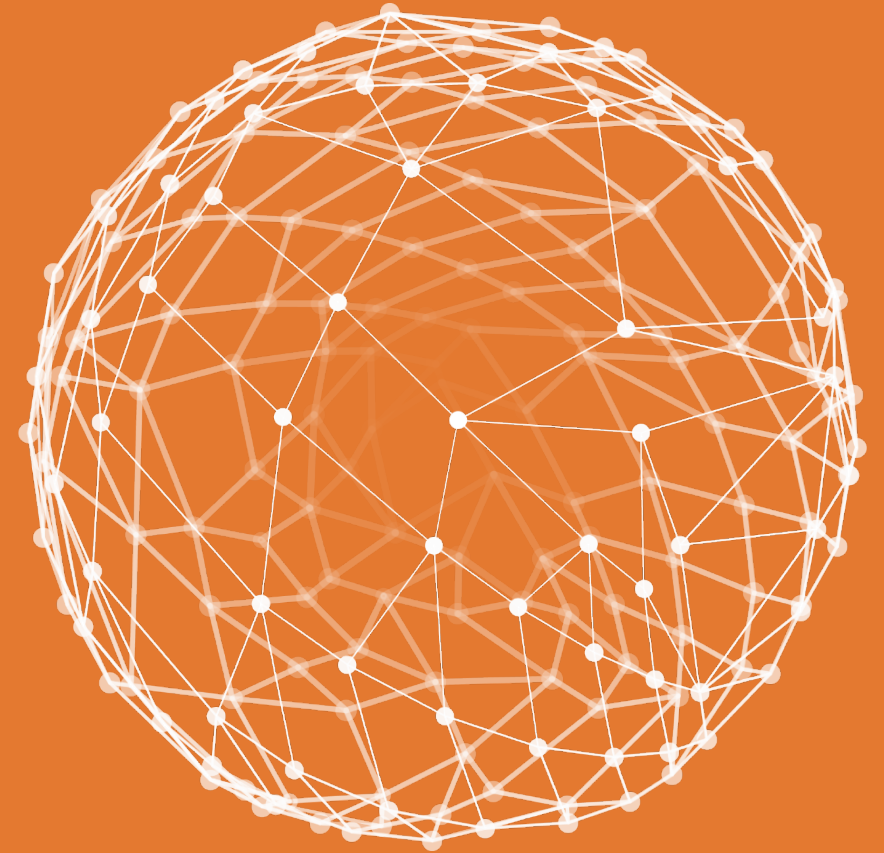
<sup>2</sup>Huang et al., Nature Reviews, Gastroenterology & Hepatology, Vol 18, 2021

<sup>3</sup>GlobalData 2021 and internal analysis



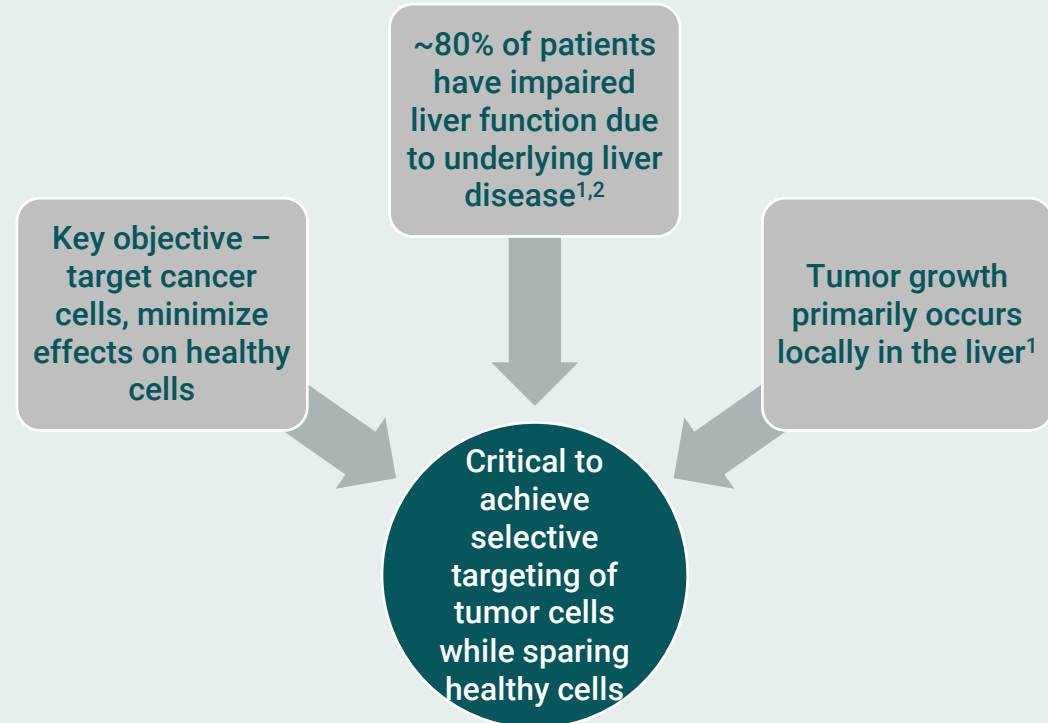
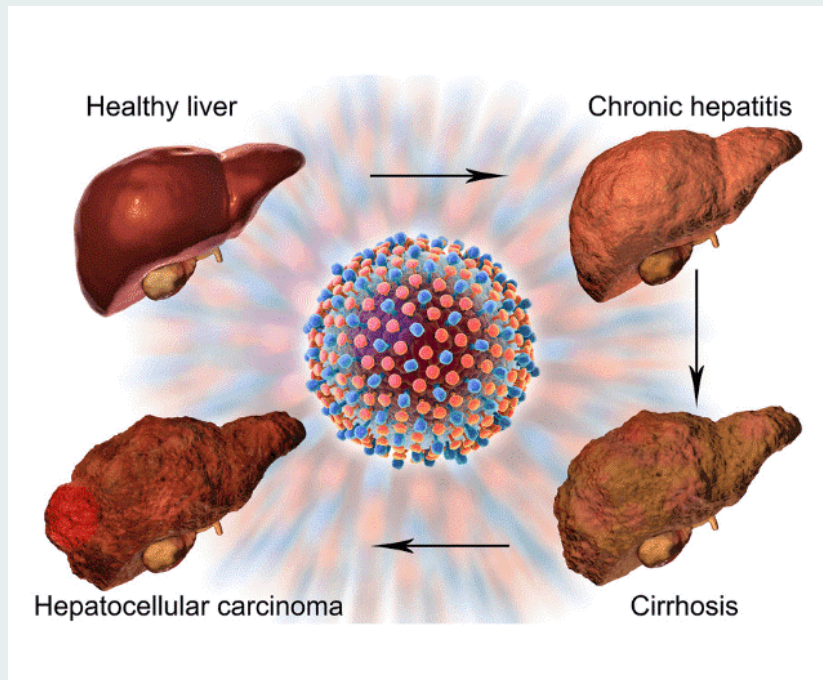


# Fostrox – tailored for the specific needs of HCC





# Targeted treatment approach critical in liver cancer (HCC)

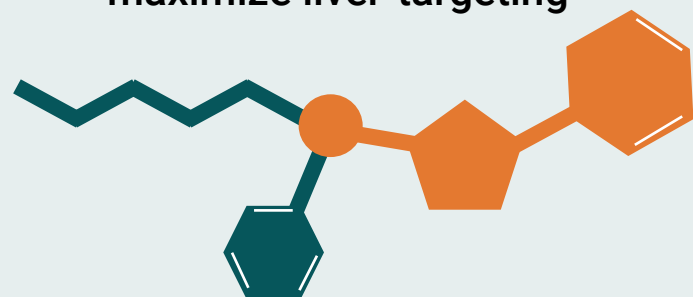


<sup>1</sup> Senthilnathan et al., Hepatology, 2012 May; 55(5): 1432-1442

<sup>2</sup> Llovet et al., Nature Reviews Gastroenterology & Hepatology, Vol 20, Aug 2023, 487-503

# Fostrox – tailored for HCC to achieve targeted DNA damage in liver tumor cells with minimal impact on healthy liver cells

The same, proven & highly successful approach used in HCV to maximize liver-targeting<sup>2</sup>



Liver-guided  
delivery –  
prodrug

Tumor-selective  
payload –  
troxacitabine



Combining prodrug & payload enables oral administration & targeted (>100-fold) liver exposure vs IV chemotherapy<sup>1</sup>



Molecule stable in GI tract & in blood, rapidly activated by enzymes in the liver<sup>2</sup>



Payload selected as it causes DNA damage selectively in liver tumor cells, sparing healthy liver cells<sup>3,4,5</sup>

<sup>1</sup>Bethell, R. et al , SAT-123, EASL 2017

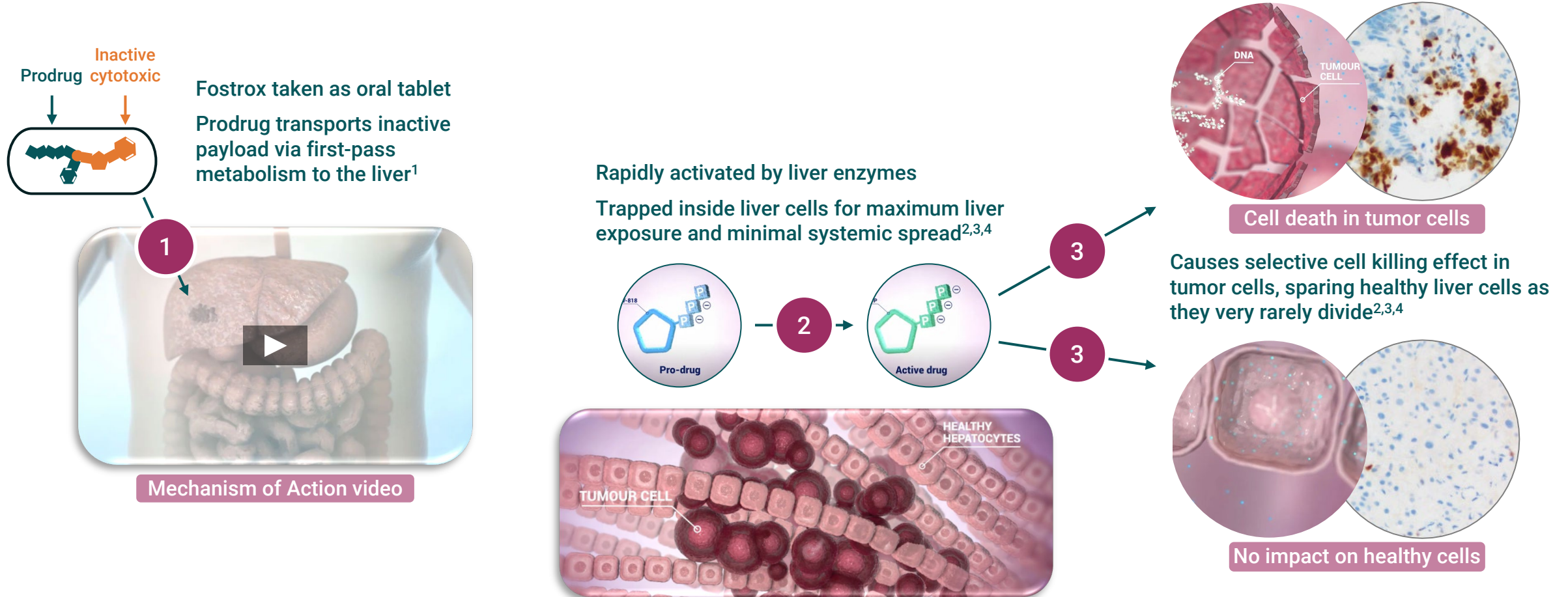
<sup>2</sup>Bethell, R. et al P-035, ILCA 2016

<sup>3</sup>Kukhanova, M et al J Biol Chem 1995

<sup>4</sup>Albertella, M. et al EASL Summit P01-05, 2018

<sup>5</sup>Öberg F. et al, EASL PO-221, 2022

# Fostrox MoA – tailored for HCC to achieve targeted DNA damage in liver tumor cells with minimal impact on healthy liver cells



<sup>1</sup>Bethell, R. et al P-035, ILCA 2016

<sup>2</sup>Kukhanova, M et al J Biol Chem 1995

<sup>3</sup>Albertella, M. et al EASL Summit P01-05, 2018

<sup>4</sup>Öberg F. et al, EASL PO-221, 2022

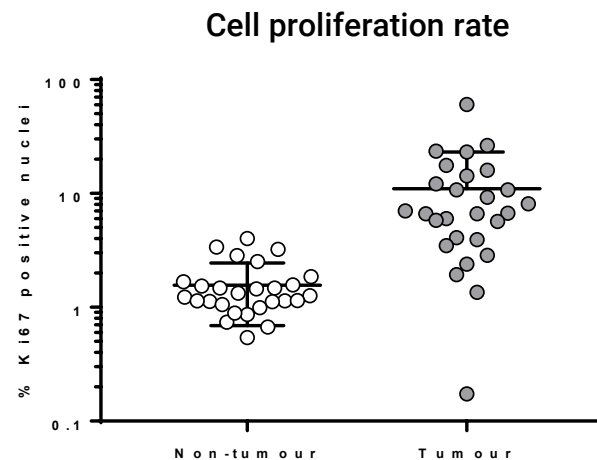


# 100-fold higher liver targeting vs IV administration & selective DNA damage in tumor cells enabling highly targeted mechanism

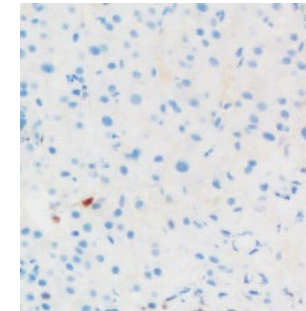
>100-fold higher liver targeting with fostrox than iv troxacitabine in rats

Compound	Route	Dose (μmol/kg)	AUC <sub>Liver</sub> (nmol*h/g)	AUC <sub>Plasma</sub> (μmol*h/L)	AUC ratio (Liver/Plasma)
Troxacitabine	iv	80	<1.2	80	<0.016
Fostrox	oral	80	10	5.4	1.9

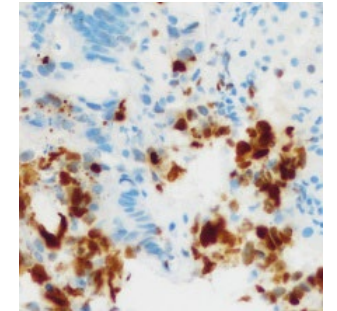
Liver tumor cells divide significantly more often than non-tumor cells<sup>1</sup>



Fostrox induces DNA damage in tumor cells, sparing normal liver tissue<sup>2</sup>



Normal liver tissue\*



Tumor tissue\*

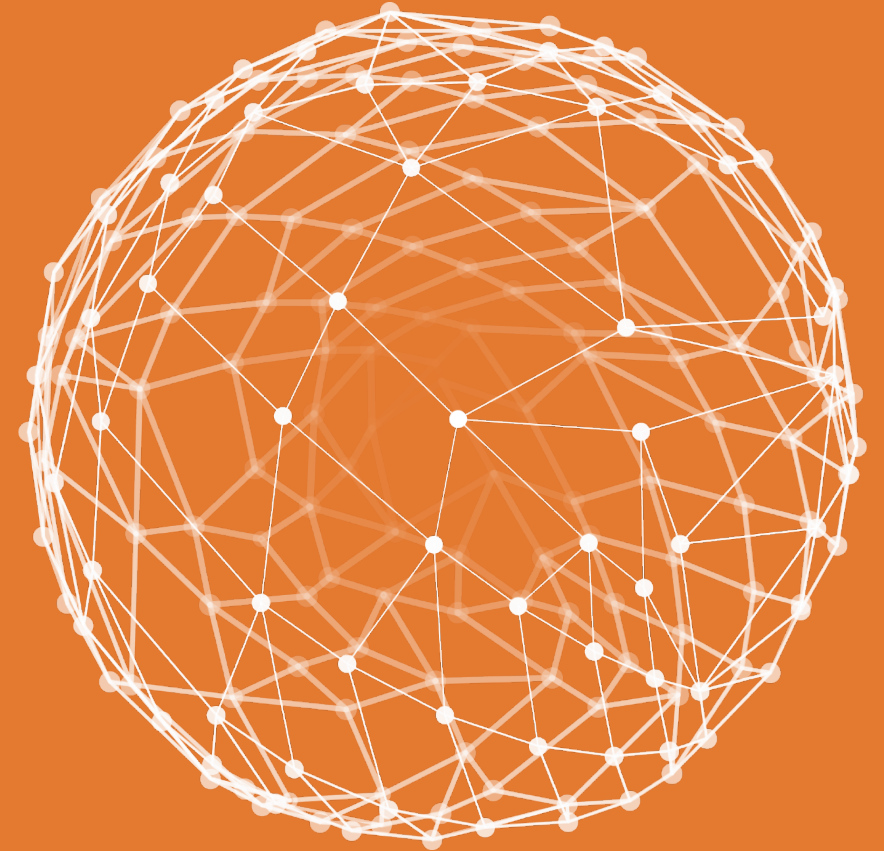
Fostrox-induced DNA-damage indicated by pH2AX immunohistochemistry (IHC) staining of liver biopsy from phase 1b monotherapy

<sup>1</sup>Albertella, M. et al EASL Summit P01-05, 2017

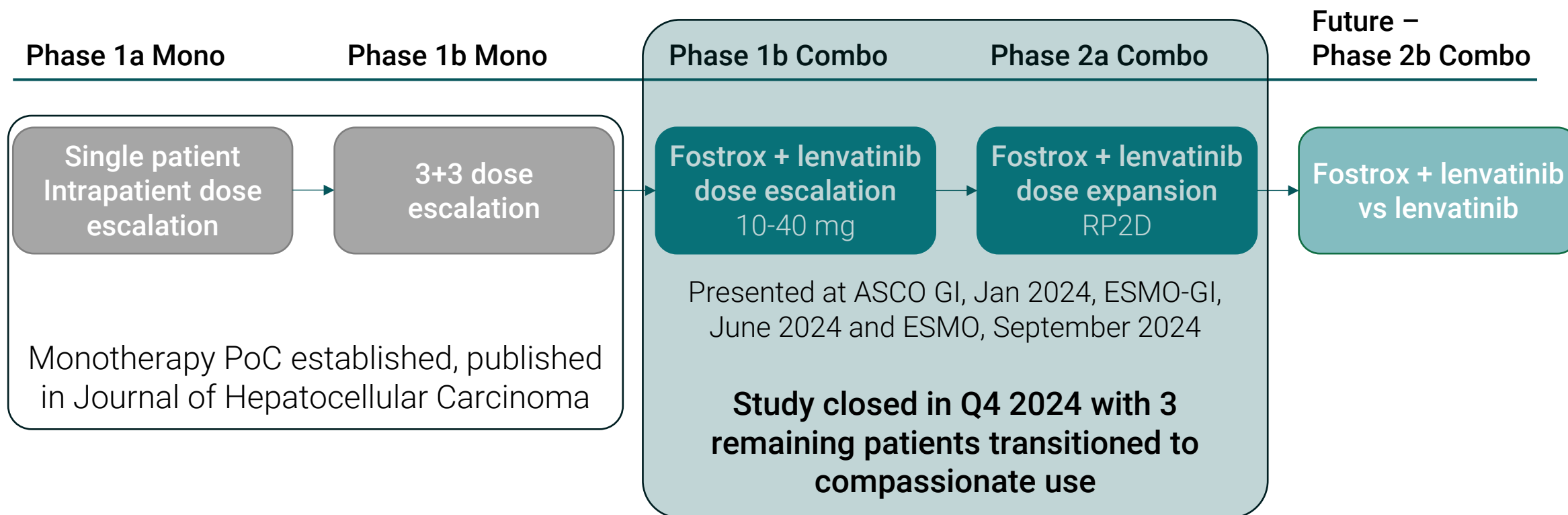
<sup>2</sup>Öberg F. et al, EASL PO-221, 2022

\*Induced DNA damage indicated by pH2AX IHC staining (brown color) in patient biopsies

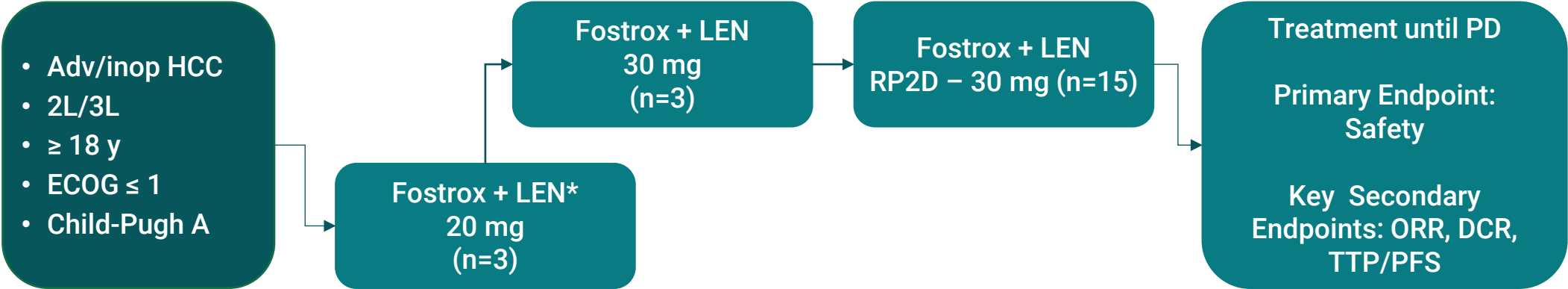
**Fostrox + Lenvima shows  
promise of improved  
outcomes in 2L HCC**



# Fostrox Clinical Development Program; monotherapy PoC established, focus on combination approach in 2L HCC



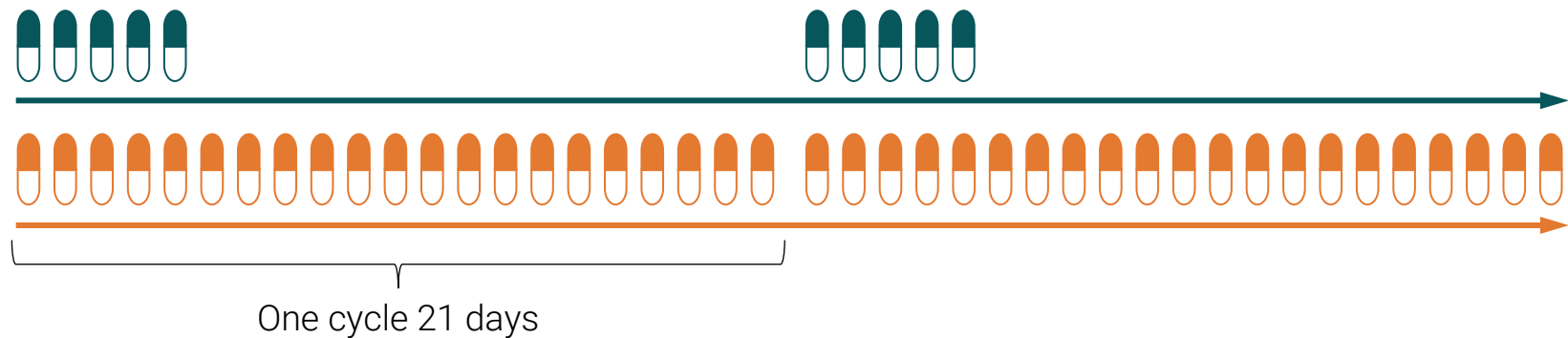
# Fostrox + Lenvima phase 1b/2a study design



Patients were enrolled at 15 sites in the UK, Spain and South Korea. Imaging assessments (CT & MRI) every 6 weeks.

**Fostrox:** Oral QD  
5 days in 21 days cycles

**LEN:** Oral QD continuous  
(8 or 12 mg)



\*LEN = lenvatinib



# Global phase 1b/2a study with fostrox + Lenvima (TKI) positive, final data presented at EASL in February



Poster P02-13 presented by Dr. Jeff Evans, Glasgow, at  
EASL Liver Cancer Summit in February in Paris



# Patient characteristics reflecting generous inclusion criteria

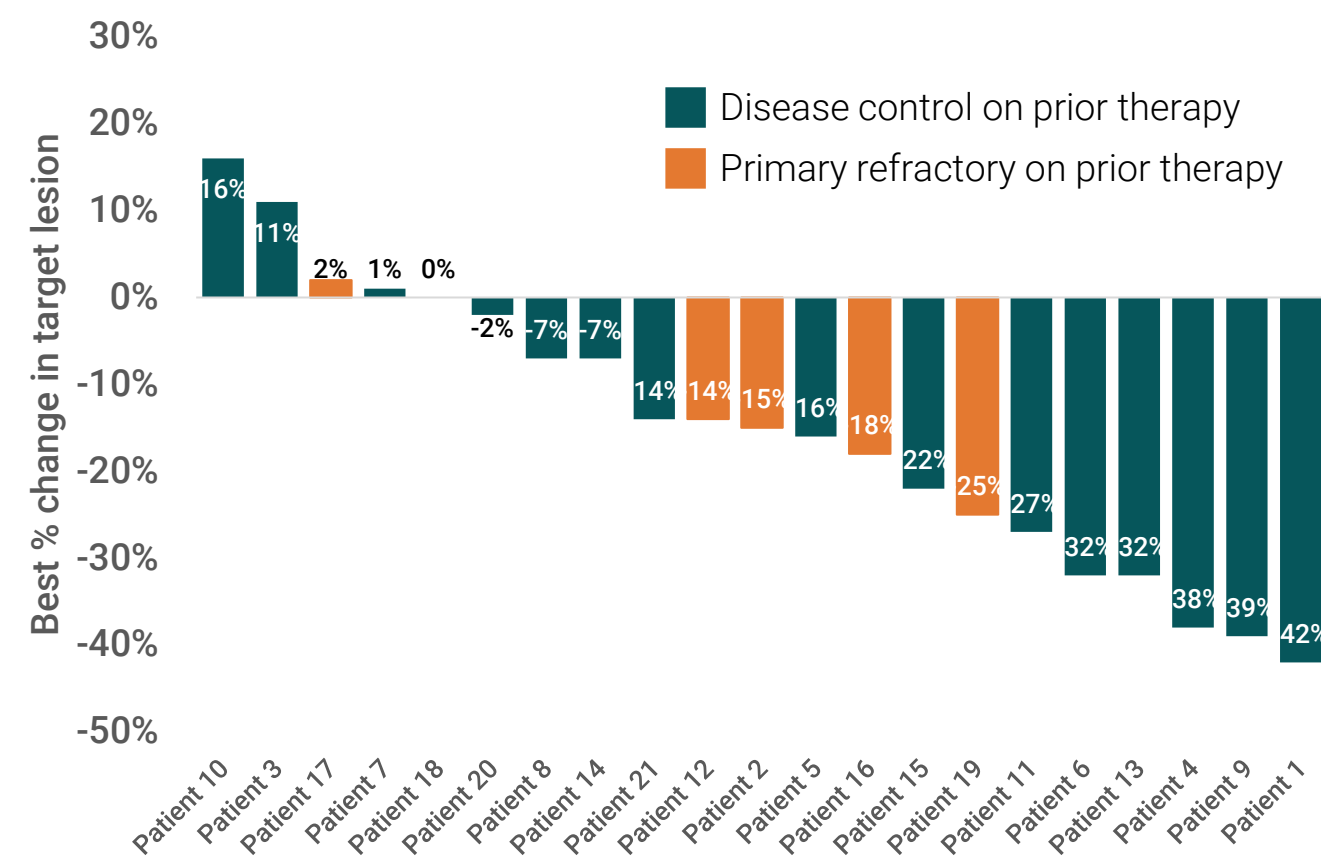
Patient characteristics <sup>1</sup>	N = 21
Mean age (range)	62 yrs (42 - 82)
Gender, Female / Male (%)	24 / 76
ECOG Performance status 0/1 (%)	71 / 29
Child-Pugh A (%)	100
Viral/Non-viral (%)	76* / 24
<b>Extra hepatic lesion(s) Y/N (%)</b>	67 / 33
<b>AFP ≥400 ng/mL at baseline Y/N (%)**</b>	45 / 55
Region, Asia / Europ (%)	67 / 33
<b>Prior treatment lines; 2nd line/3rd line (%)</b>	81 / 19
Prior atezolizumab/bevacizumab in 1L (%)	86
Prior local therapy (TACE, RFA etc)	70
PD on prior treatment (%)	100
<b>Primary refractory on prior therapy (%)***</b>	24
Starting dose fostrox, 20mg / 30mg (%)	14 / 86

\*HepB-81% and HepC-19%; \*\*AFP- NA for 1 pt; \*\*\*Active treatment ≤ 12 weeks. Data NA for 3 patients  
Slide 23

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# More than 75% of patients experiencing tumor shrinkage<sup>1</sup>

Best percentage change in target lesion size related to treatment response in first line

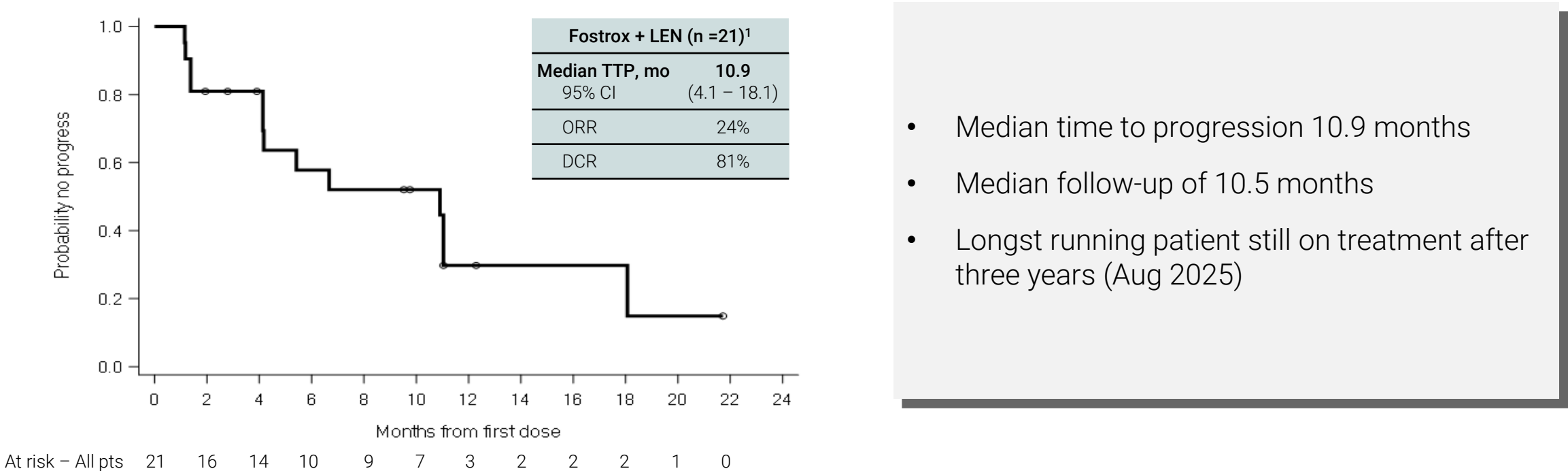


- Median duration of response 7.0 months
- Longest duration of response still ongoing at 19.5 months
- Patients benefitted from treatment independent of outcome in previous line of therapy

<sup>1</sup>Chon et al., ESMO 2024, Poster 986.

# Median TTP 10.9 months, indicating substantially improved efficacy compared with Lenvima alone<sup>1</sup>

Median time to progression (TTP) with fostrox + LEN – investigator review, RECISTv1.1



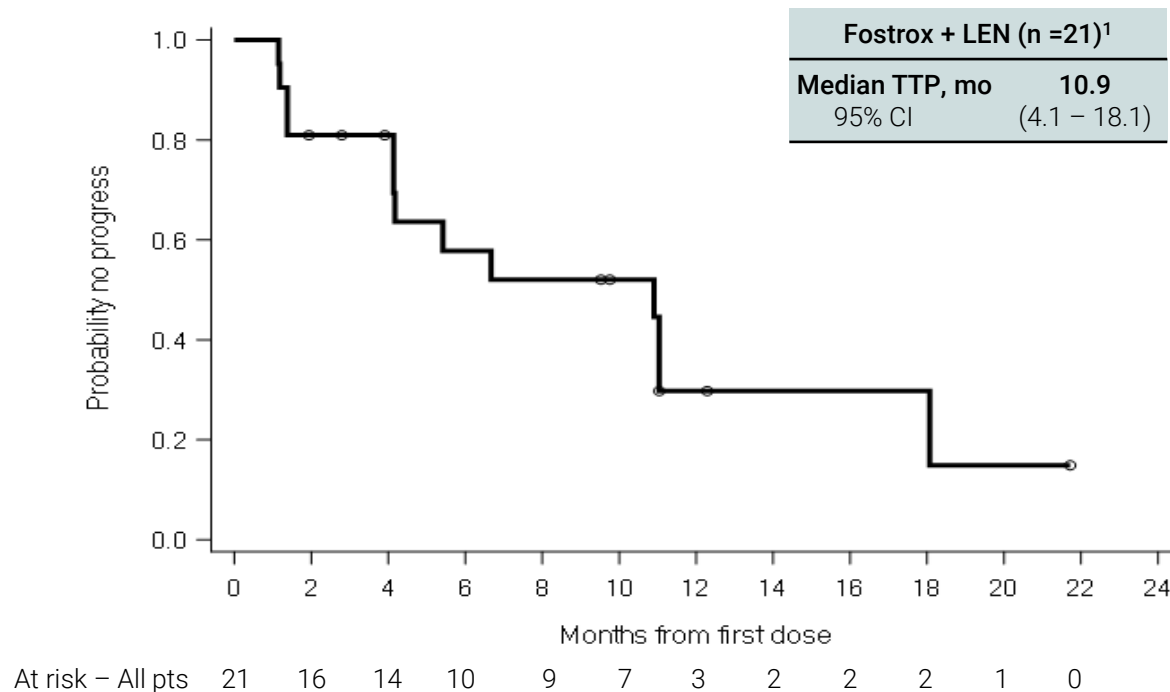
- Median time to progression 10.9 months
- Median follow-up of 10.5 months
- Longst running patient still on treatment after three years (Aug 2025)

<sup>1</sup>Chon et al., ESMO 2024, Poster 986.



# Median time to progression (TTP) 10.9 months, remarkably longer than Lenvima monotherapy and other 2L HCC treatments

## Median TTP (Kaplan-Meier) with fostrox + Lenvima



## Median TTP/PFS vs previous studies in 2L HCC

### Lenvima after IO combo:

Kobayashi et al. 2023 (n=12)  
Chon et al. 2024 (n=40)  
Hiraoka et al. 2023 (n=101)  
Palmer et al. 2023 (n=53)  
Yoo et al. 2023 (n=19)  
Yano et al. 2023 (n=24)  
Persano et al. 2024 (n=86)

### Other TKIs in 2L:

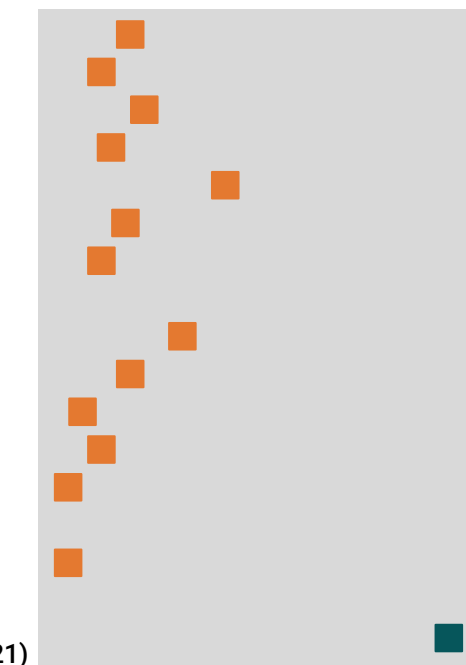
Abou-Alfa et al. 2018 (n=470)  
Chan et al. 2022 (n=48)  
Bruix et al. 2016 (n=379)  
Yoo et al. 2024 (n=40)  
Zhu et al. 2019 (n=292)

### Pembro + regorafenib in 2L:

El-Khoueiry et al. 2024 (n=68)

### Fostrox + Lenvima (n=21)

~3.5-4 months



TTP - Months

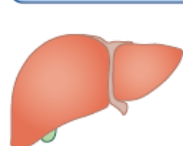
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# Korean Cancer Study Group prospective study data with Lenvima post Tecentriq + Avastin, aligns with other 2<sup>nd</sup> line outcome data

## Second-line lenvatinib after atezolizumab-bevacizumab in advanced HCC

### Study design

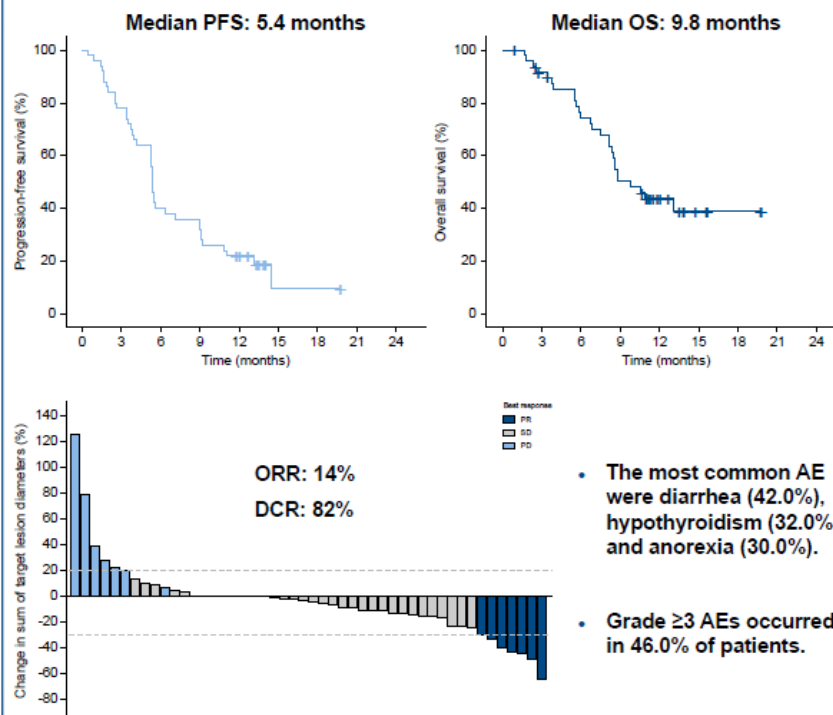
HCC progressed on 1<sup>st</sup>-line atezolizumab-bevacizumab



2<sup>nd</sup>-line lenvatinib

- Investigator-initiated, multicenter, single-arm phase 2 study
- 50 patients enrolled from 13 sites in Korea
- Primary end point: PFS (>median 4.5 months)
- Secondary endpoints: OS, ORR, DCR, DoR, and safety.

### Results



### Conclusion

- Lenvatinib demonstrated promising efficacy and a manageable safety profile as a second-line treatment for patients with HCC progressing on atezolizumab-bevacizumab.
- These findings offer prospective evidence supporting lenvatinib as a viable treatment option in the post-atezolizumab-bevacizumab context.

# Similar patient characteristics across the Lenvima monotherapy study and the Phase 1b/2a fostrox + Lenvima study

Patient characteristics	N = 50 Lenvima monotherapy 13 sites in Korea <sup>1</sup>	N = 21 Fostrox + Lenvima 15 sites in Korea, UK & Spain <sup>2</sup>
Mean age (range)	66 (32-86)	62 yrs (42 - 82)
Gender, Female / Male (%)	18 / 82	24 / 76
Child-Pugh A (%)	100	100
BCLC stage A/B or C (%)	12 / 88	0 / 100
Viral/Non-viral (%)	72 / 28	76* / 24
AFP ≥400 ng/mL at baseline Y/N (%)**	44 / 56	48 / 52
Region, Asia / Europe (%)	100 / 0	67 / 33
Prior treatment lines; 2 <sup>nd</sup> line/3 <sup>rd</sup> line (%)	100 / 0	81 / 19
Prior atezolizumab/bevacizumab in 1 <sup>st</sup> line (%)	100	86
Prior TACE therapy (%)	58	70

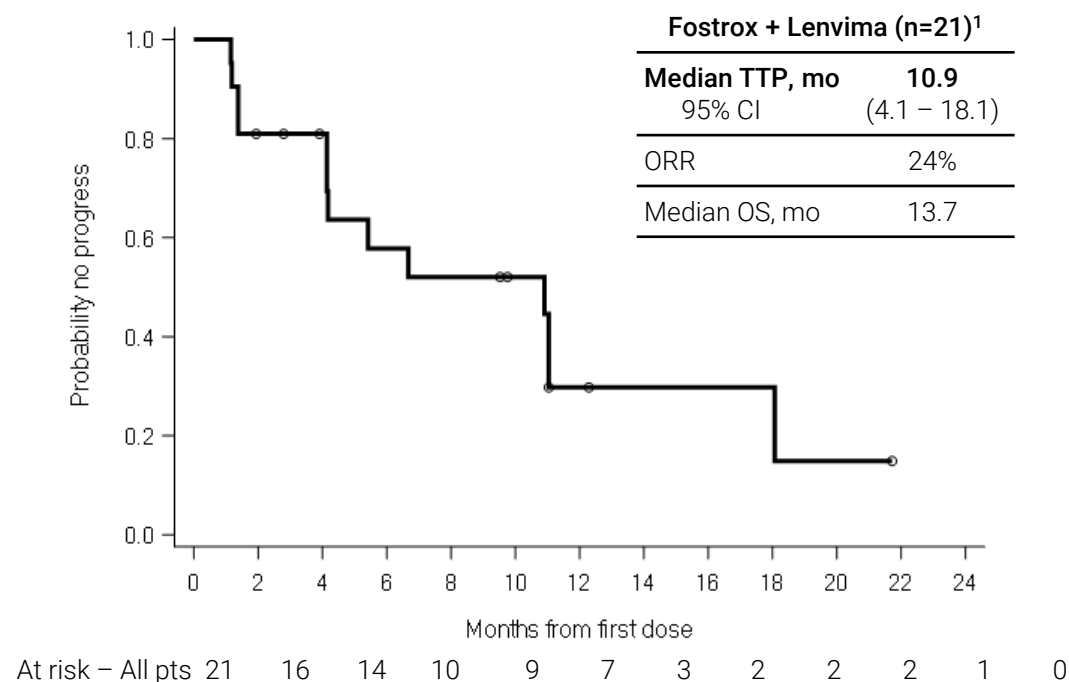
\*HepB-81% and HepC-19%; \*\*AFP- NA for 1 pt

<sup>1</sup>Kim et al., Journal of Hepatology, Sept 04 2025

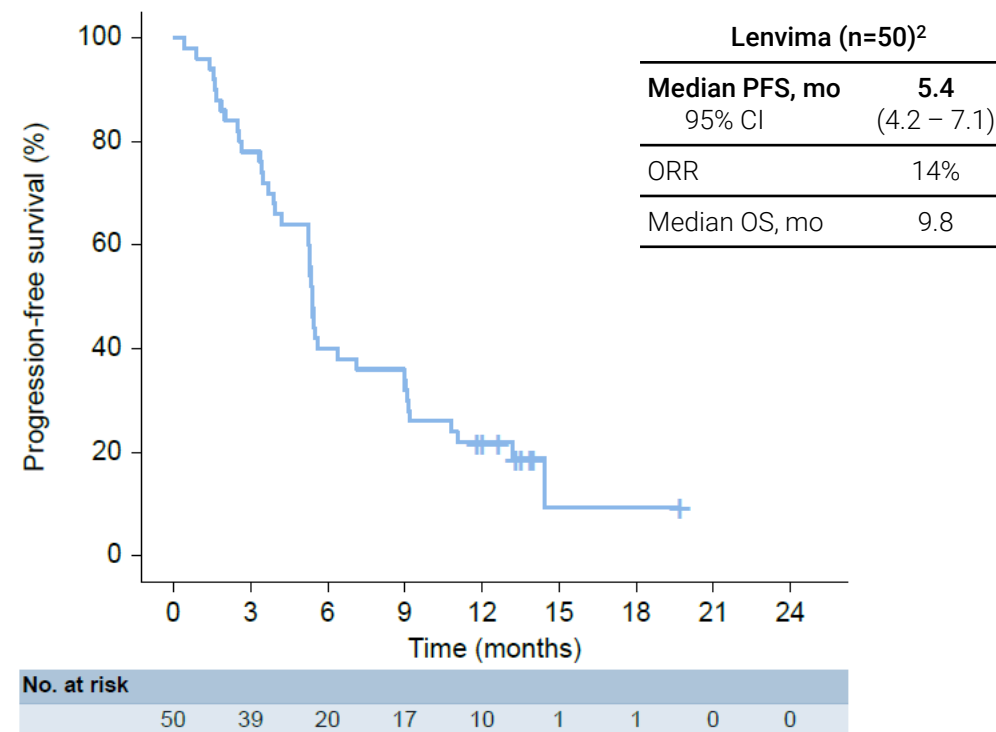
<sup>2</sup>Chon et al., ESMO 2024, Poster 986

# Fostrox + Lenvima phase 1b/2a data showed substantially better outcome data compared to the Lenvima monotherapy study

## Median TTP – Fostrox + Lenvima<sup>1</sup>



## Median PFS – Lenvima monotherapy<sup>2</sup>

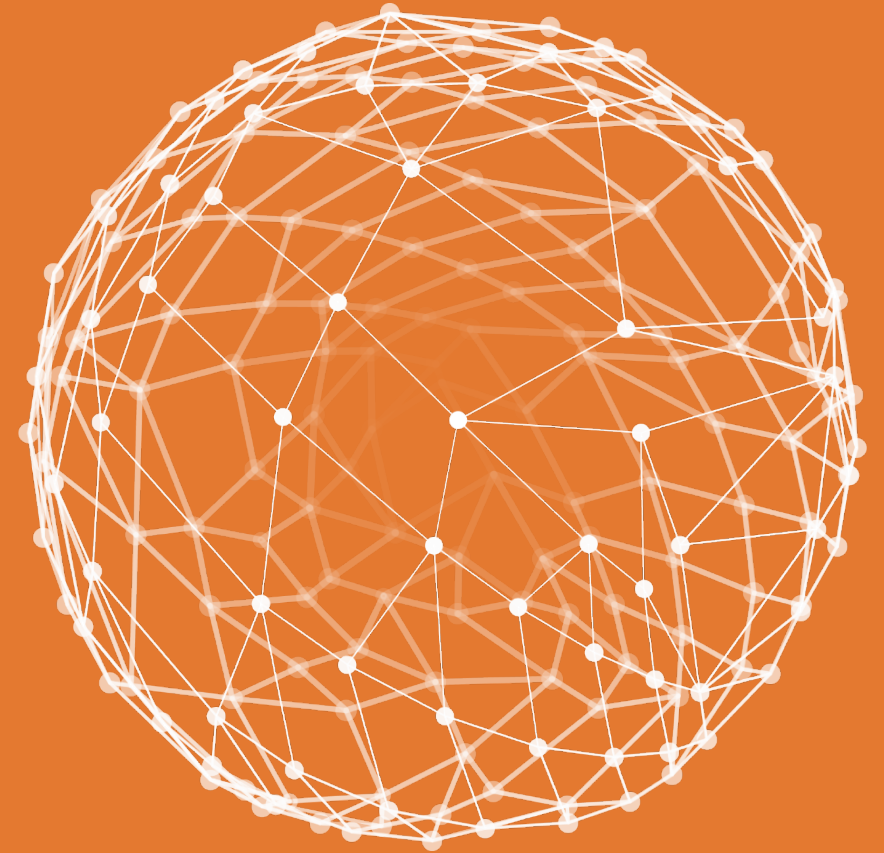


<sup>1</sup>Chon et al., ESMO 2024, Poster 986

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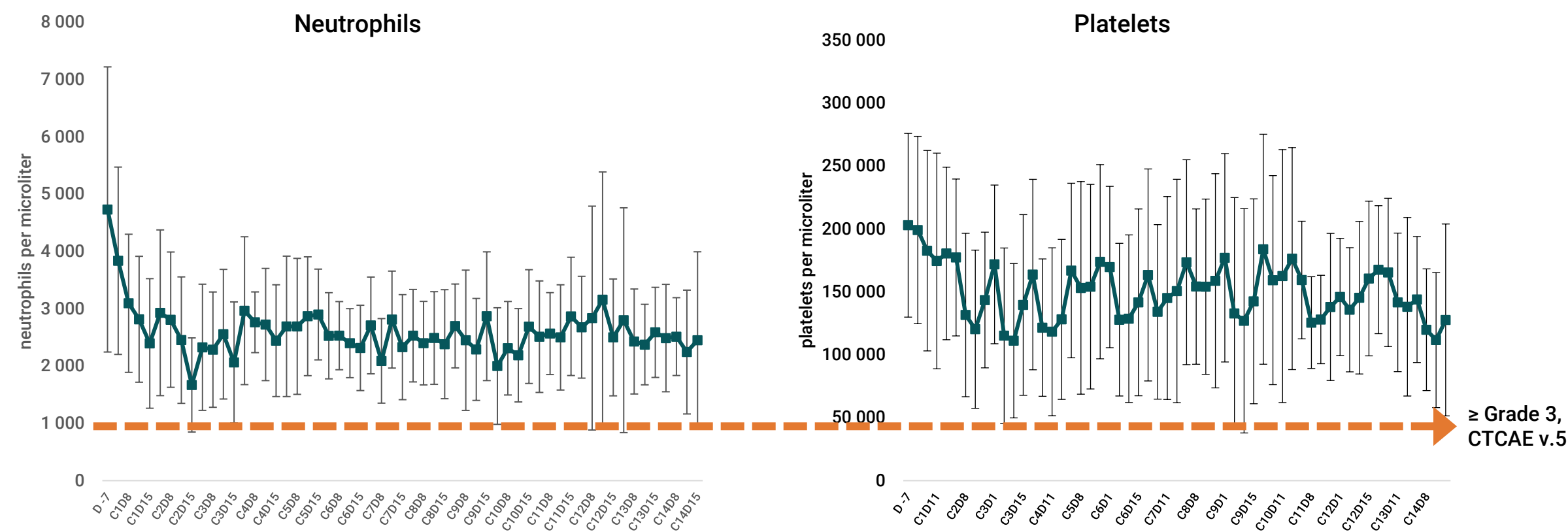


**Fostrox + Lenvima shows  
encouraging tolerability  
enabling patients to remain  
on treatment long-term**



# Absolute neutrophil and platelet counts were stable over the course of treatment, enabling long-term use<sup>1</sup>

Longitudinal neutrophil & platelet counts, at all time points measured over first 10 months of treatment



<sup>1</sup>Chon et al., ESMO 2024, Poster 986.

# Liver targeting properties supports encouraging tolerability profile, enabling patients to remain on treatment long-term

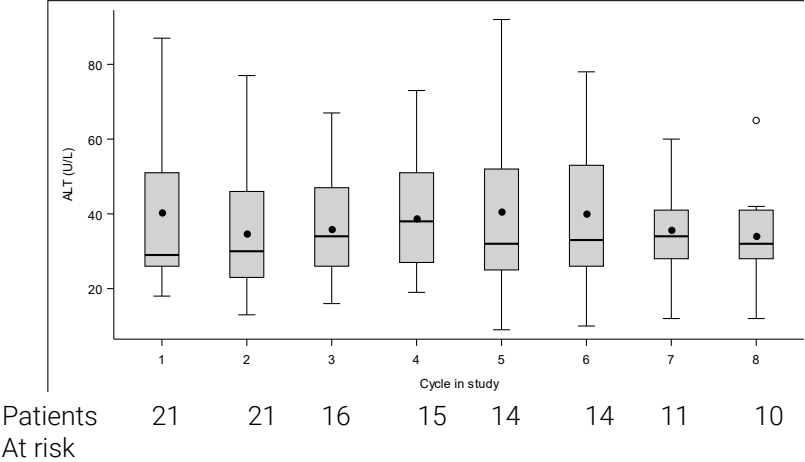
Adverse Events*	Treatment emergent AEs any grade No of pts (%)	Treatment emergent AEs Grade $\geq 3$ No of pts (%)	Fostrox Treatment-related Grade $\geq 3$ No of pts (%)	LEN Treatment-related Grade $\geq 3$ No of pts (%)
<b>Any AE</b>	21 (100)	17 (81)	11 (52)	14 (67)
<b>Hematologic AE</b>				
Thrombocytopenia	13 (62)	6 (29)	5 (24)	6 (29)
Neutropenia (no febrile)	10 (48)	8 (38)	8 (38)	6 (29)
Anaemia	7 (33)	3 (14)	3 (14)	3 (14)
Leukocyte decrease	5 (24)	1 (5)	1 (5)	1 (5)
<b>Other AE</b>				
Hypothyroidism	12 (57)			
Diarrhoea	10 (48)	1 (5)		1 (5)
Hand-foot syndrome	10 (48)	1 (5)		1 (5)
Fatigue	9 (43)			
Asthenia	8 (38)	3 (14)	1 (5)	2 (10)
Decreased appetite	8 (38)			
Proteinuria	7 (33)	1 (5)		1 (5)
Hypertension	6 (29)	2 (10)		2 (10)
Cough	5 (24)			
Pruritus	5 (24)			

- No unexpected adverse events
- Hematological AEs were transient and manageable in nature
- Grade  $\geq 3$  events in 11 patients (52%) with only 7 events resulting in dose delay or discontinuation
- No patients with febrile neutropenia or low platelet count with bleeding
- No fostrox related deaths or SAEs

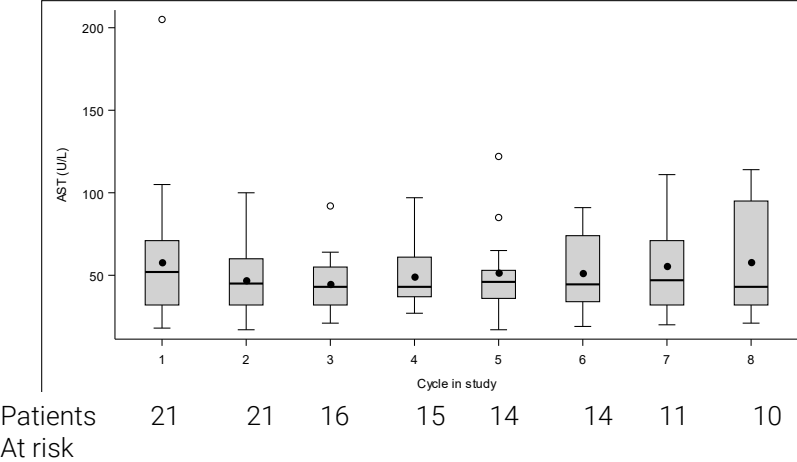
# Stable liver function during treatment with fostrox + Lenvima

- no deterioration in liver enzymes or change in ALBI score

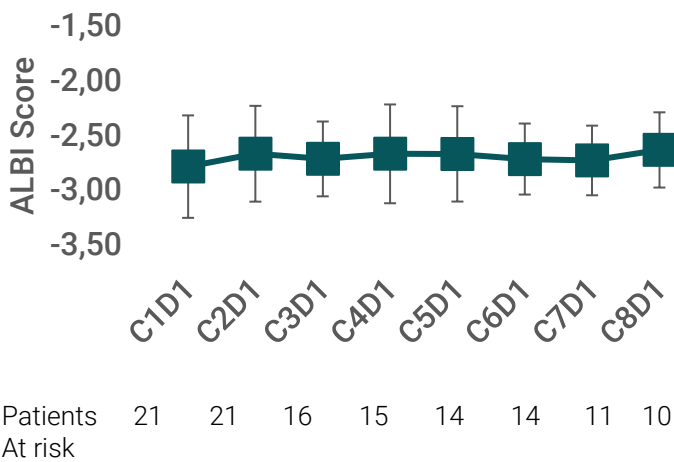
ALT change over duration of treatment



AST change over duration of treatment

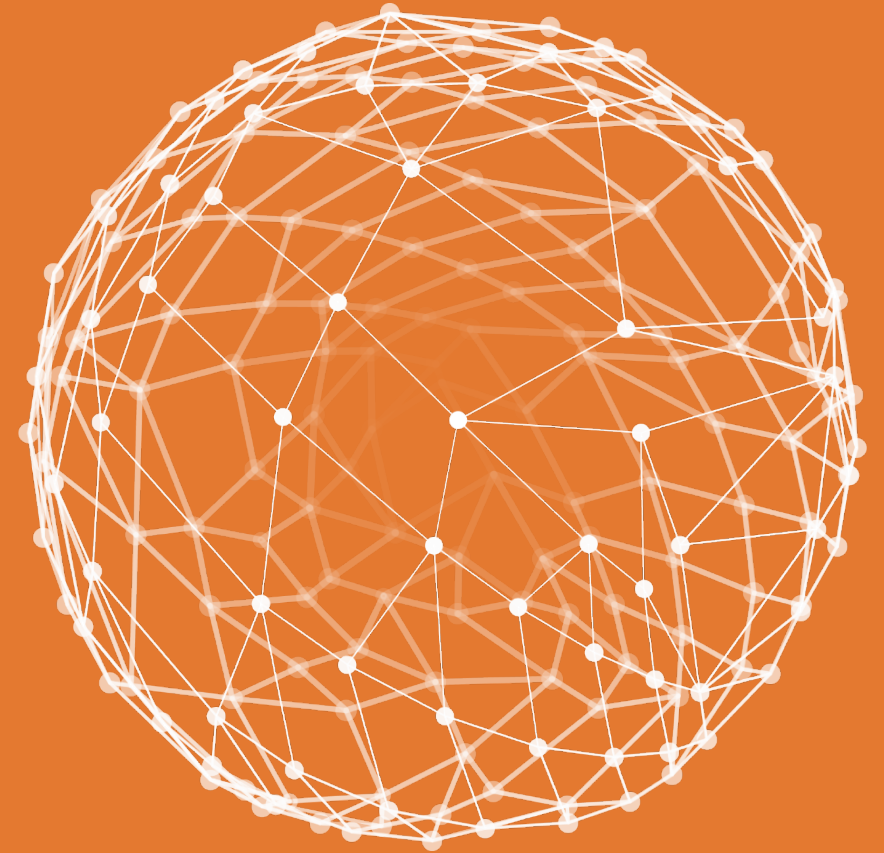


ALBI score change over duration of treatment



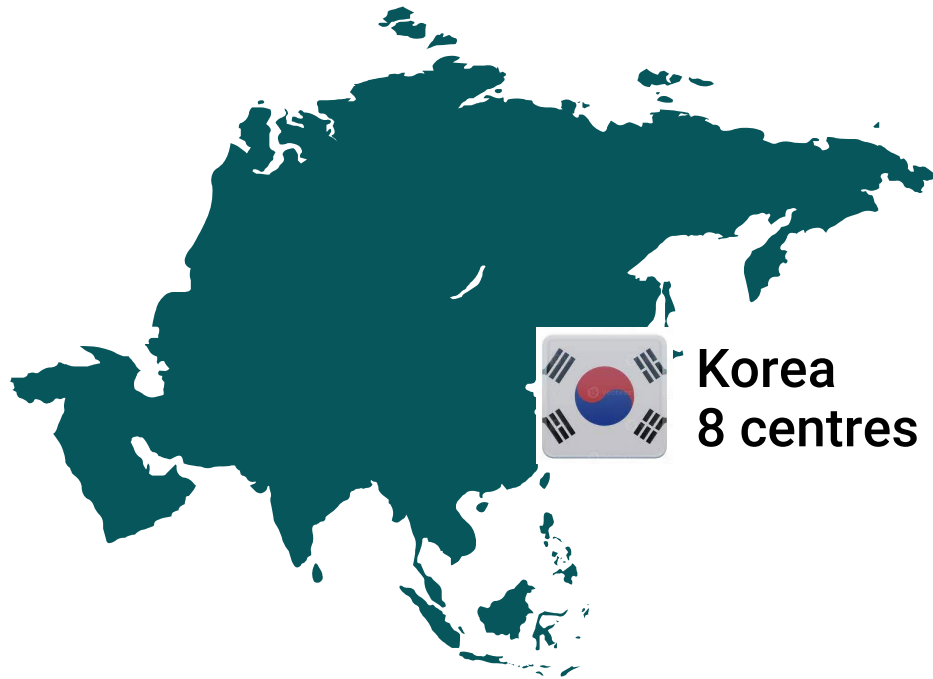


# FLEX-HXX: Phase 2 study enables rapid generation of randomized, comparative data to confirm benefit of fostrox combination with Lenvima in 2<sup>nd</sup> line HCC



# FLEX-HCC

## Fostrox + Lenvatinib Combination for Advanced HCC



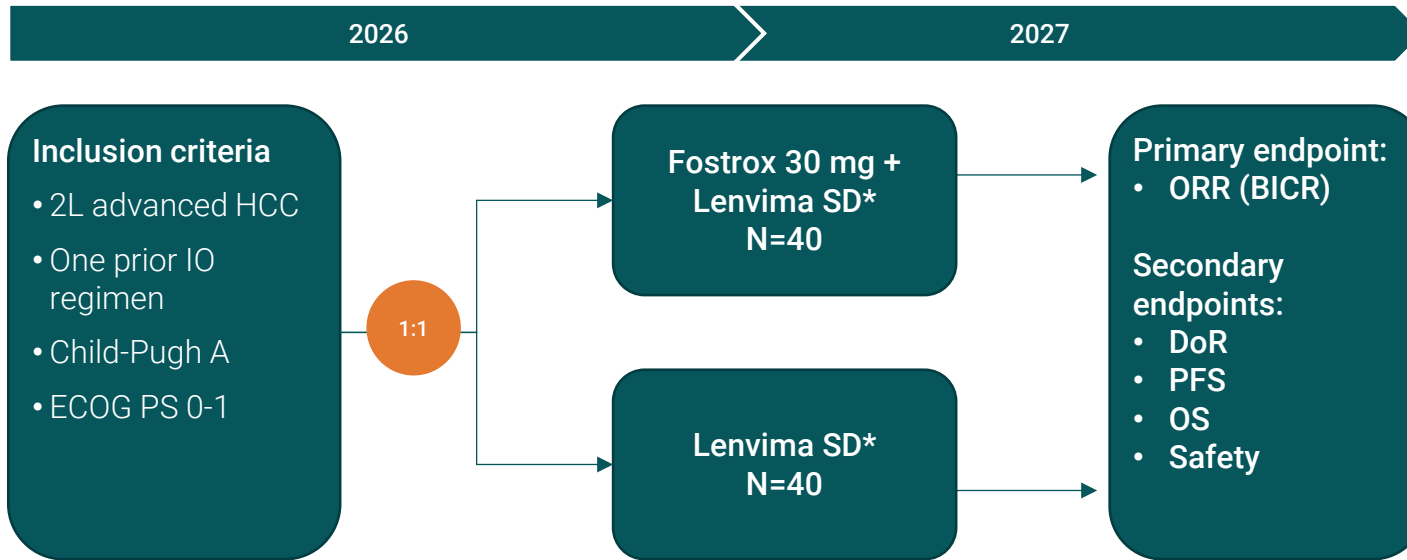
Primary Investigator



Dr. Hong Jae Chon

CHA Bundang Hospital,  
Seoul, Korea

# FLEX-HCC: Randomized, comparative phase 2 study to confirm benefit for fostrox + Lenvima combination in 2<sup>nd</sup> line HCC



\*standard weight based dose in HCC

Response assessments every 6 week with CT or MRI

## Study design:

- 80 pts randomized: Fostrox + Lenvima vs Lenvima
- 8 sites in Korean Cancer Study Group
- Enrolment: 12 months
- Primary endpoint FU: 3-6 months
- Efficacy evaluated by Blinded Independent Central Review (BICR)

## Key benefits:

- Generates robust comparative efficacy and safety data in collaboration with established research consortium
- Enables rapid data read out
- Strengthens design of registrational study

# Key patent approval in Japan for fostrox + Lenvima extending protection until 2041, complementing previous approval in EU

Medivir receives Notice of Allowance for fostrox plus lenvatinib combination patent by Japan Patent Office

2025-07-08

Medivir AB (Nasdaq Stockholm: MVIR), a pharmaceutical company focused on developing innovative treatments for cancer in areas of high unmet medical need, announces today that it has received a Notice of Allowance by the Japan Patent Office (JPO) for the company's patent application covering claims for the combination of fostroxacitabine bralpamide (fostrox) with lenvatinib (Lenvima) for the treatment of hepatocellular carcinoma (HCC) and cancer metastases to the liver.



Covers the combination of fostrox + Lenvima for the treatment of HCC and metastases to the liver



Now approved in Japan, EU and Australia which indicates likelihood of other key regions to follow



Generates critical extension of patent protection until 2041

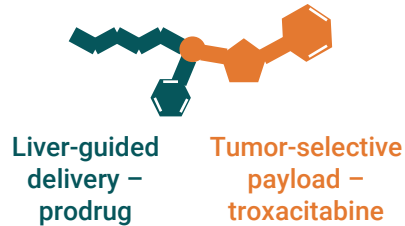


# Fostrox (fostroxacitabine bralpamide)

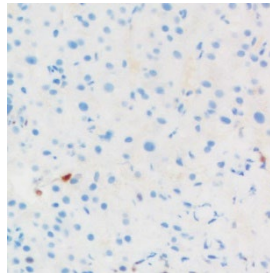
## The first oral, liver-targeted treatment tailored for HCC

Oral, liver-activated small molecule inducing DNA damage in tumor cells, sparing healthy liver cells<sup>3</sup>

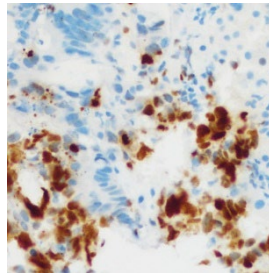
Unique, liver-targeted approach in HCC



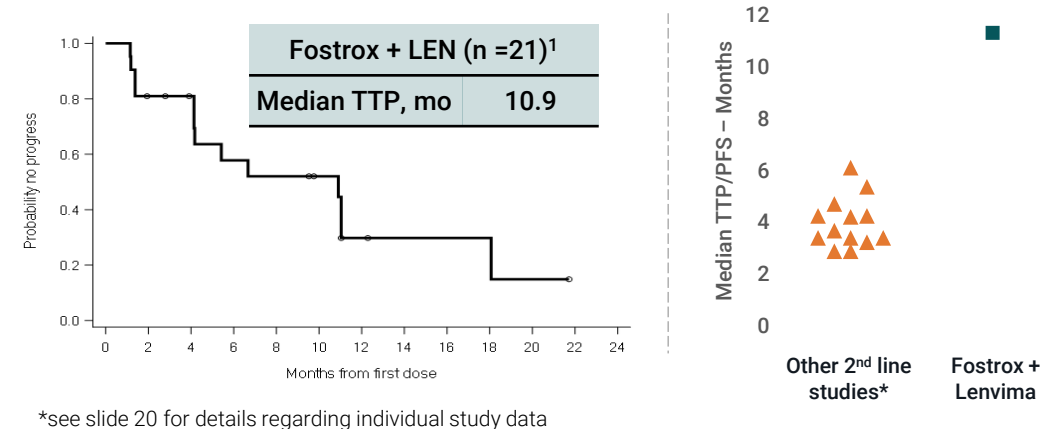
No DNA damage in healthy liver tissue



DNA damage in tumor tissue



10.9 months time to progression, substantially better than SoC<sup>1,2</sup>



Absence of effective treatment options in 2<sup>nd</sup> line enables first-to-market opportunity for fostrox + Lenvima



- No 2<sup>nd</sup> line treatments approved in advanced HCC
- FLEX-HCC Phase 2 designed to rapidly confirm comparative benefit of fostrox in combination with Lenvima

Market opportunity in 2<sup>nd</sup> line HCC >\$2.5bn, with significant upside potential

>\$2.5bn

2<sup>nd</sup> line HCC market by 2030, fastest growing cause of cancer death in US<sup>4</sup>



Significant upside in liver metastasis from other solid tumors

<sup>1</sup>Chon et al., ESMO, 2024, Poster 986

<sup>2</sup>Based on data from previous 2L phase 3 HCC studies with Stivarga, Cyramza & Cabometyx and investigator initiated prospective & retrospective 2L studies with Lenvatinib

<sup>3</sup>Evans et al ASCO GI, 2021

<sup>4</sup>Ma et al., Cancer, June 15, 2019; 2089-2098

# Board with extensive drug development experience



**Chairman of the Board**  
**Dr. Uli Hacksell**

- Member since 2018, Chairman since 2021
- Over 30 years pharma & biotech experience, including 10 years' experience as CEO of publicly owned companies.



**Board member**  
**Dr. Angelica Loskog**

- Ph D, Clin. Immunology
- CEO Lokon Pharma & scientific advisor at venture cap Nexttobe
- More than 25 year's academic drug development experience within immune oncology



**Board member**  
**Dr. Anna Törner**

- Ph D Statistics, MScs Pharmacy
- Broad experience from drug development, especially regulatory affairs
- Founder consulting company SDS Life Science within drug development and statistics.

# Thank You!

