

Interdisciplinary management and the role of Tumour Boards

26 Oct 2024 LEAD APAC HCC Expert Meeting

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Outline



Multidisciplinary
team/tumour boards
management of HCC



Application of next
generation sequencing in
liver cancer

Why we need multidisciplinary team and tumour boards ?

Conventionally for..

- Regulation and accreditation
- Case review after action
- Documentation and registry

Why we need multidisciplinary team and tumour boards ?



Improved Decision-Making



Enhanced Communication



Patient-Centred Approach



All Treatment Modalities Considered



Access to Latest Treatments

Curable or Incurable?

Collaborating to turn the incurable into curable

63 y/o male, BCLC-C, Child-Pugh A5

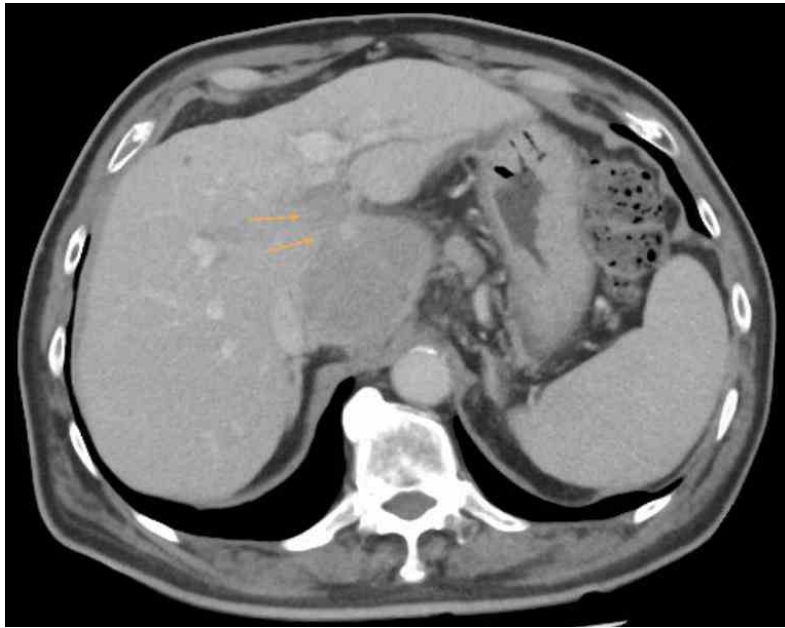


2023/05/04

A typical HCC, S1, with left portal vein invasion (cT4N0M0 AJCC 8th).

MDT discussion

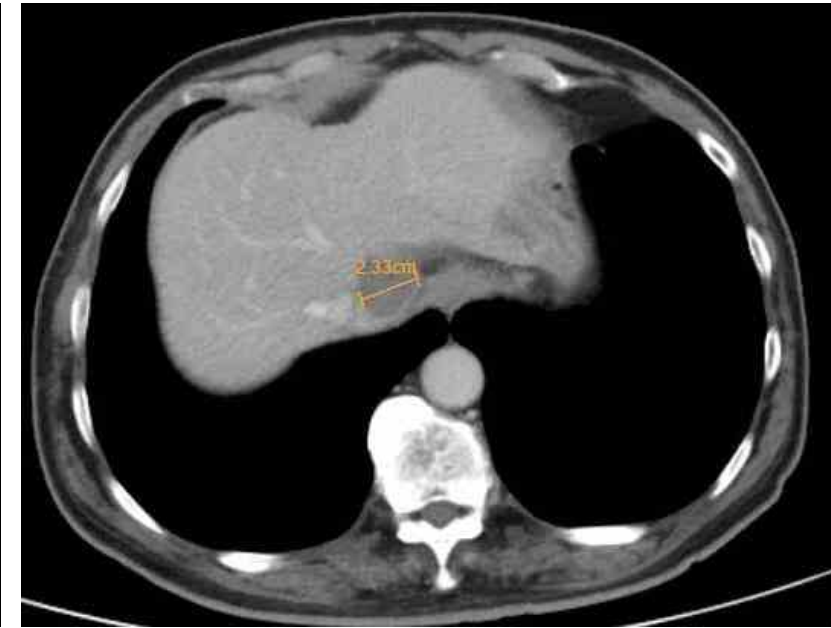
**Consensus: clinical trial enrollment
Atezolizumab plus bevacizumab
(Morpheus control arm)**



71mm



32mm (6wk)

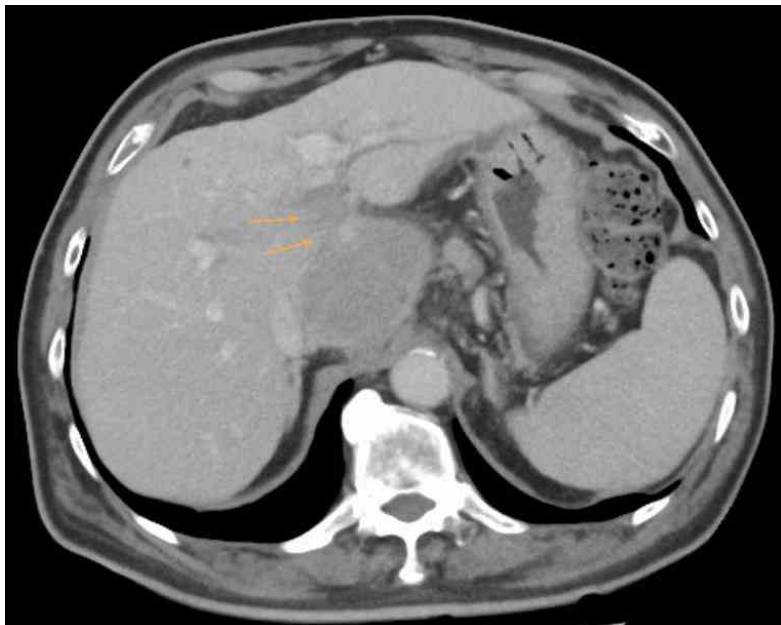


23mm (12wk)

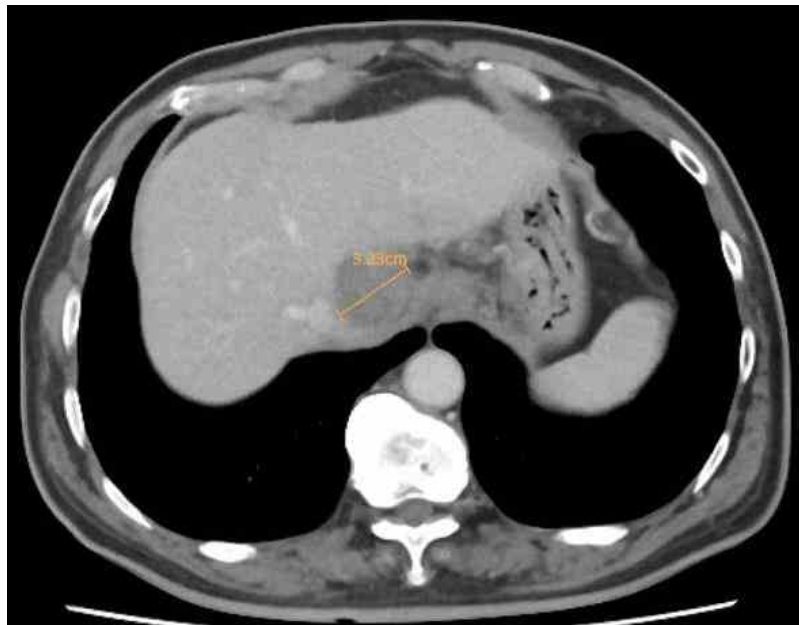
2023/05/04

A typical HCC, S1, with left portal vein invasion (T4N0M0).

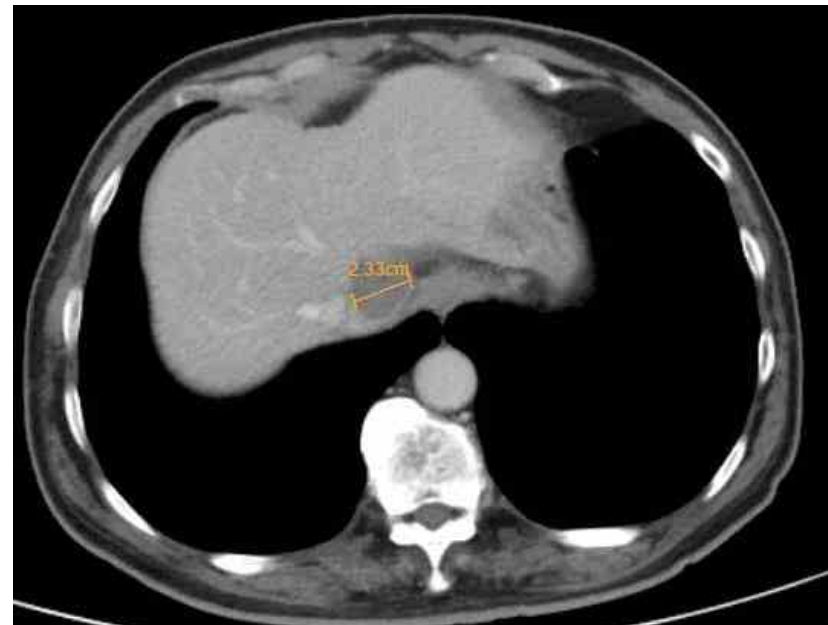
(1/1)	2023/05/10	2023/05/17	2023/06/06	2023/06/26	2023/07/18	2023/08/07	2023/08/29
	08:33	07:53	07:17	09:22	09:15	13:52	09:26
Alpha-Fetoprotein(ng/mL)	24582.17	15377.85	1353.60	145.81	17.37	4.91	3.64



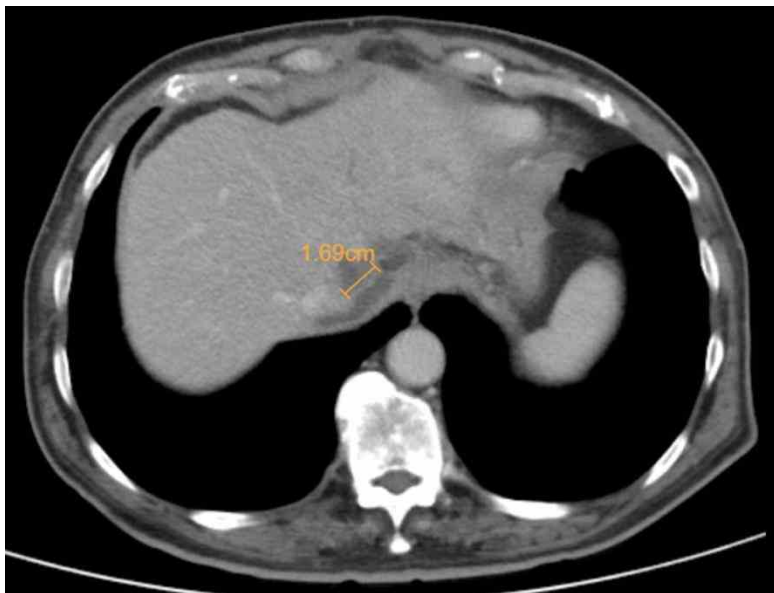
71mm (2023/05/04)



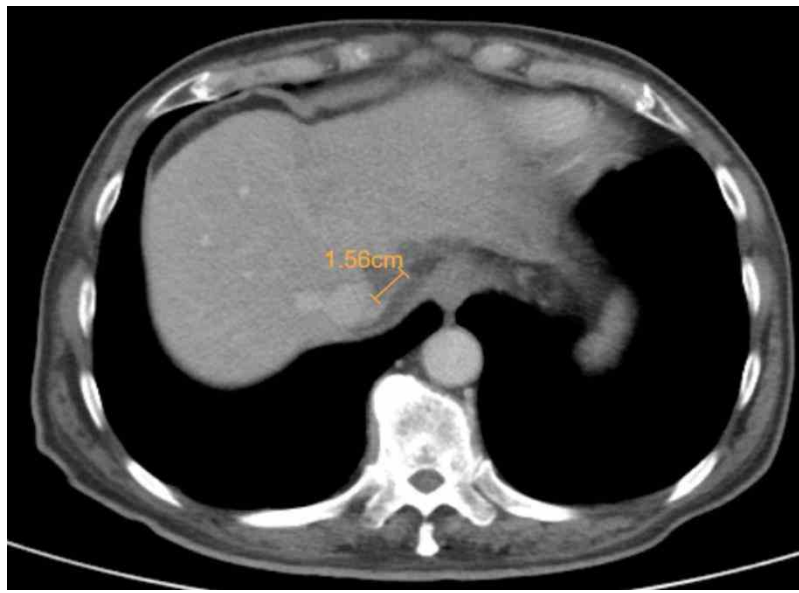
32mm (6wk)



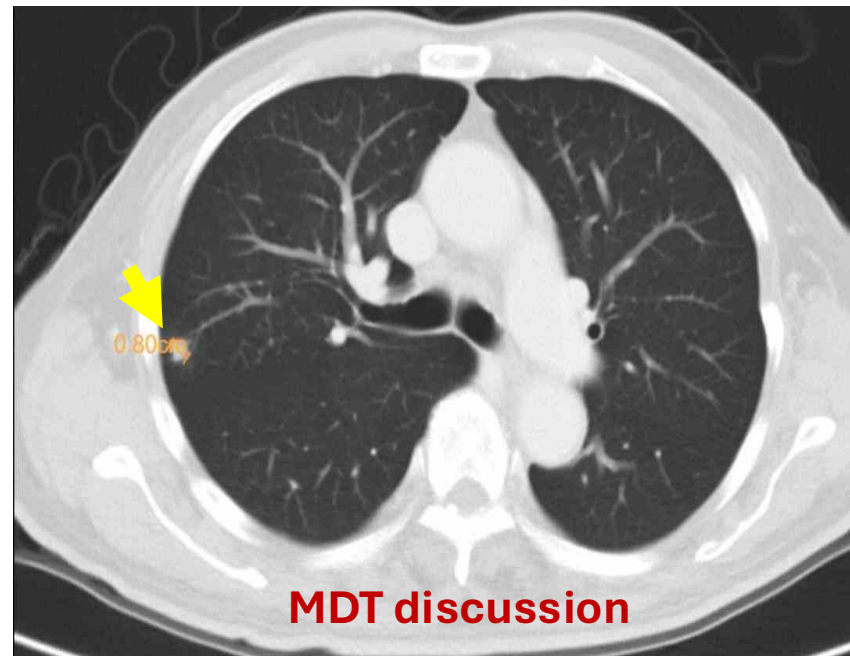
23mm (12wk)



17 mm (54wk)



16 mm (66wk)



MDT discussion

病理號	S2434686	收件日期	2024/08/09 00:00	報告日期	2024/08/15 17:21
檢體	r	科別	SURG	病床	08B0202
組織由來	RUL				
臨床診斷	Lung tumor				

檢查報告

Lung, upper lobe, right, right VATS wedge resection, chronic inflammation

The specimen submitted consists of 1 lung wedge tissue fragment measuring 3.0 x 2.8 x 1.0 cm in size in fresh state.

Grossly, one brown nodule measures 0.5 x 0.4 x 0.3 cm is noted.

Representative section is taken and labeled as: A1 Jar 1

Microscopically, section shows a focus of chronic inflammation composed of reactive pneumocytes, lymphocyte infiltrate and myxoid plug. No dysplastic change is seen and no infiltration of HePar-1+ cells is noted. The case is also reviewed by another pathologist Dr. Hu.

MDT discussion and follow-up: the next step ?

週二上午 肝癌多專科門診

參考症狀	科部	醫師姓名	醫師專長	診間
肝癌	腫瘤外科部	吳耀銘	肝膽腫瘤手術、肝膽微創手術、肝臟移植	B 區 46 診
肝癌	腫瘤外科部	蘇德暉	消化外科、肝膽胰腫瘤、腹腔鏡、達文西手術、疝氣手術	B 區 47 診
肝癌	腫瘤內科部	許駿	消化系癌症、臨床試驗、內科腫瘤學	B 區 55 診
肝癌	腫瘤內科部	林宗哲	肝膽/肺癌診斷治療、新藥臨床試驗	B 區 56 診
肝癌	腫瘤內科部	沈盈君	肝膽/泌尿道癌症藥物治療、新藥臨床試驗	B 區 57 診
肝癌	腫瘤內科部	莊建淮	一般腫瘤、消化系癌症、肝膽癌、泌尿腫瘤、皮膚癌、新藥臨床試驗	B 區 38 診
肝癌	綜合內科部	陳健弘	肝炎、肝硬化、肝癌藥物治療及臨床試驗	B 區 60 診
肝癌	放射腫瘤部	梁祥光	頭頸癌、鼻咽癌、腦癌、肝腫瘤、神經腫瘤、轉移癌之放射線治療	輻質 2 樓 5 診
肝癌	影像醫學部	劉高郎	肝腫瘤診斷、肝癌局部治療（栓塞/電燒）等、膽道引流	B1 75 診
肝癌	麻醉部	林文瑛	神經痛、術後慢性疼痛、癌症疼痛、人工血管、神經阻斷	A 區 31 診

Multidisciplinary Clinics of Liver Cancer (Tuesday)

Surgeon

Medical oncologist

Hepatologist

GI specialist

Interventional Radiologist

Anaesthesiologist

Liver Cancer Multidisciplinary Team



Why we need multidisciplinary team and tumour boards ?



Improved Decision-Making



Enhanced Communication



Patient-Centred Approach



All Treatment Modalities Considered



Access to Latest Treatments



Clinical-Molecular Pathology Conference

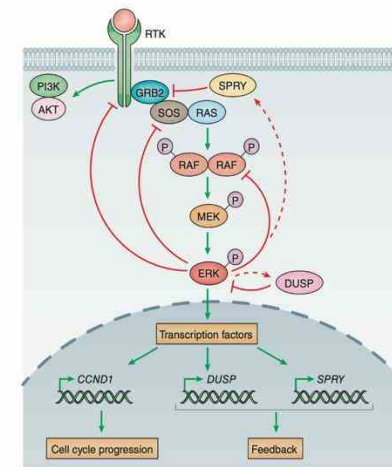
臨床及分子病理討論會

18 Oct 2024

台大醫院腫瘤醫學部
台大醫院病理部
台大醫學院基因體暨蛋白體醫學研究所

CRAF alterations

- Amplifications
- Fusions
 - Loss of N-terminal autoinhibitory domain
 - Homodimers with other CRAF fusions
 - Heterodimers with wild-type BRAF or CRAF
- Mutations
 - Autoinhibitory CR2 mutations
 - Kinase domain mutations



< 17 > ?
↑ Riaud. Nat Rev Cancer 2024

Biomarker Findings

Microsatellite status - MS-Stable
Tumor Mutational Burden - 5 Muts/Mb

Genomic Findings

For a complete list of the genes assayed, please refer to the Appendix.

KRAS wildtype
NRAS wildtype
RAF1 GPHN-RAF1 fusion
MUTYH splice site 892-2A>G
RNF43 splice site 451-23_461del34
TP53 R248W

臨床診斷 (Diagnosis): adenocarcinoma, metastatic
檢體病理編號 (Specimen ID): P2405896
檢體採集時間 (Date of collection): 2024/5/14
病理檢體部位 (Specimen site): Soft tissue
檢體類型 (Specimen type): Tissue (FFPE)
腫瘤細胞比例 (Tumor cell percentage): 20%
實驗室接收檢體時間: 2024/5/23

GENOMIC FINDINGS

KRAS - wildtype

0 Trials

NRAS - wildtype

0 Trials

RAF1 - GPHN-RAF1 fusion

9 Trials see p. 10

THERAPIES WITH CLINICAL RELEVANCE (IN PATIENT'S TUMOR TYPE)

Cetuximab 2A

Panitumumab 2A

Cetuximab 2A

Panitumumab 2A

none

THERAPIES WITH CLINICAL RELEVANCE (IN OTHER TUMOR TYPE)

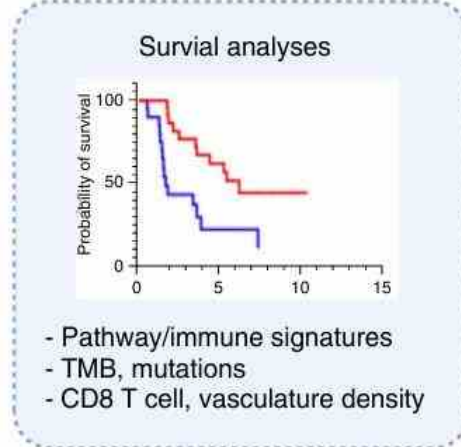
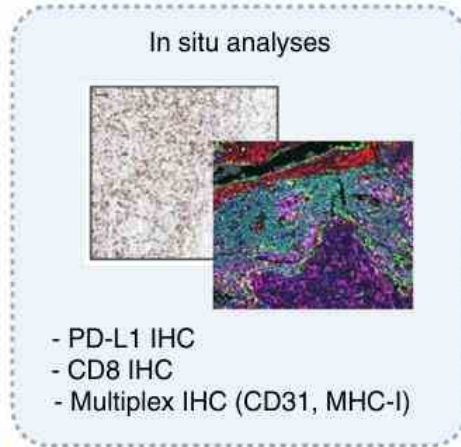
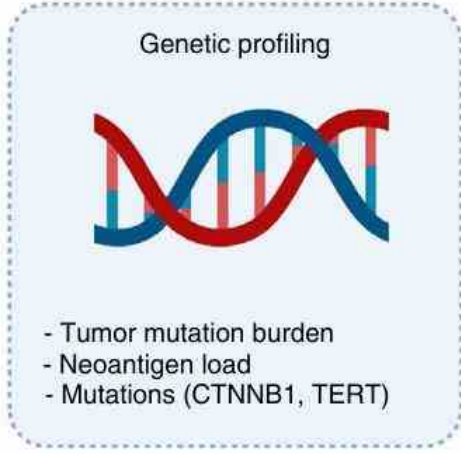
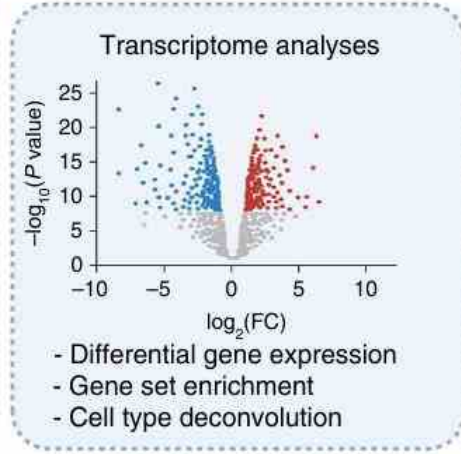
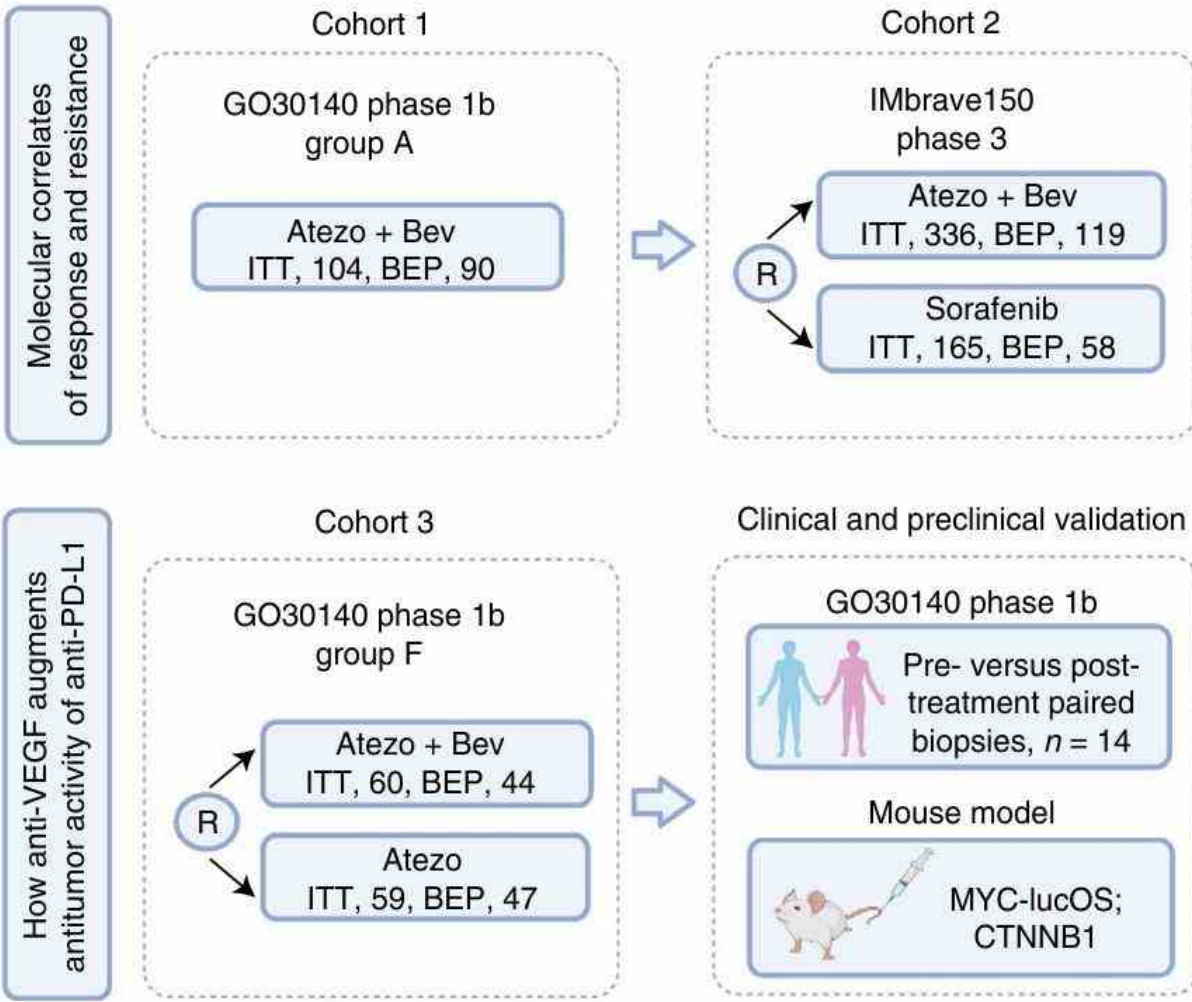
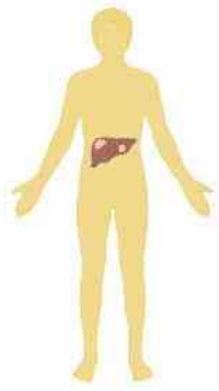
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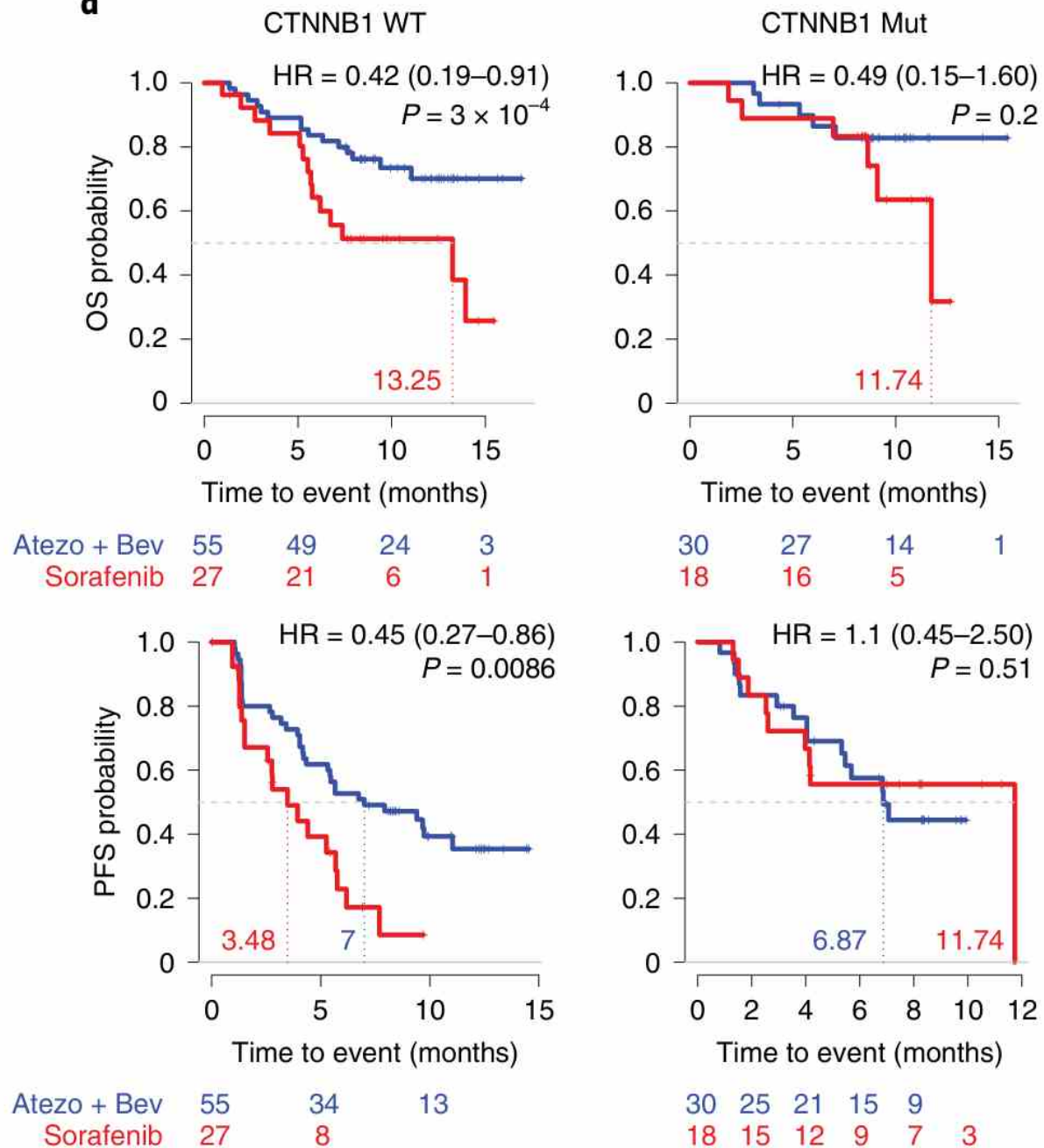
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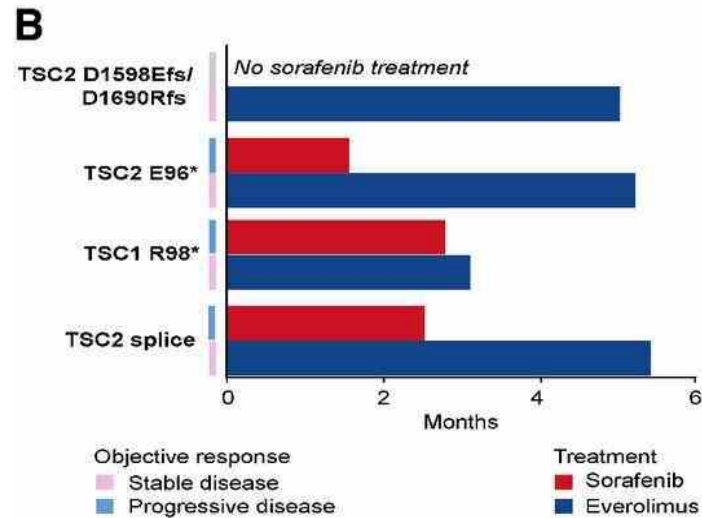
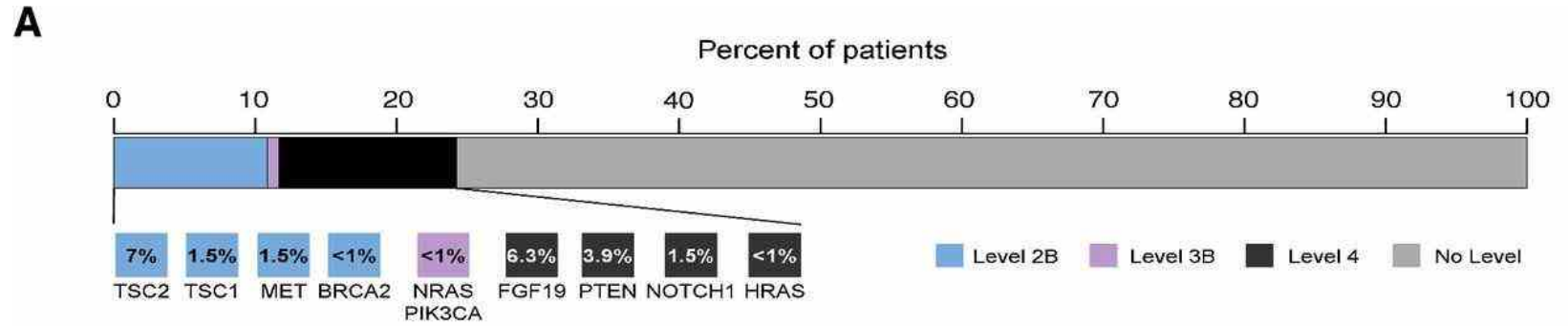
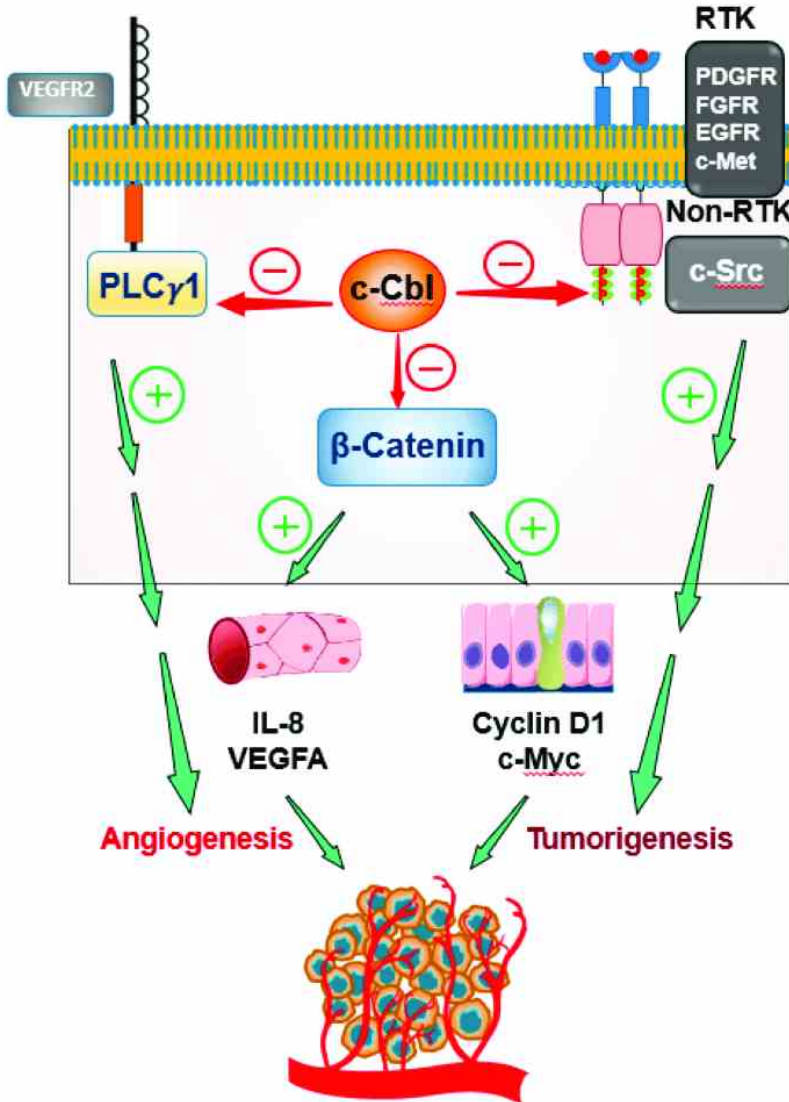
Application of NGS in liver cancer ?

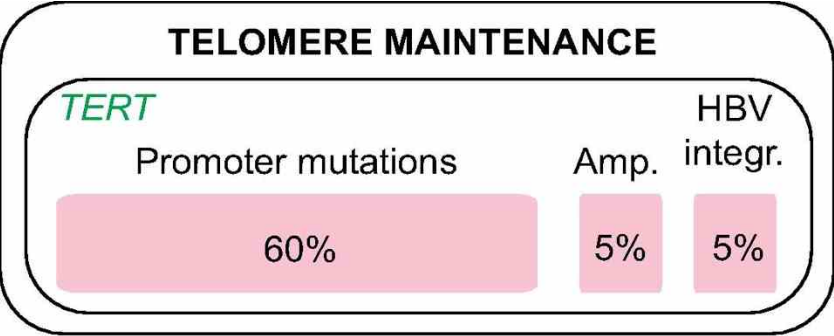
GO30140 & IMbrave150 biomarkers study



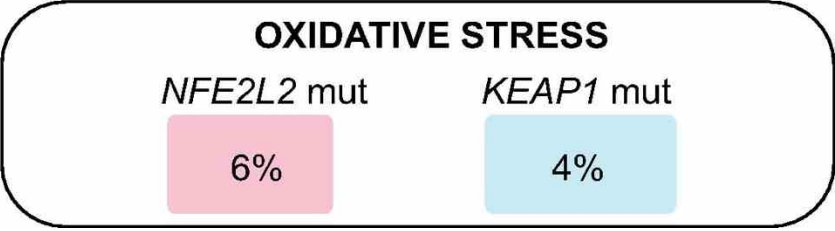
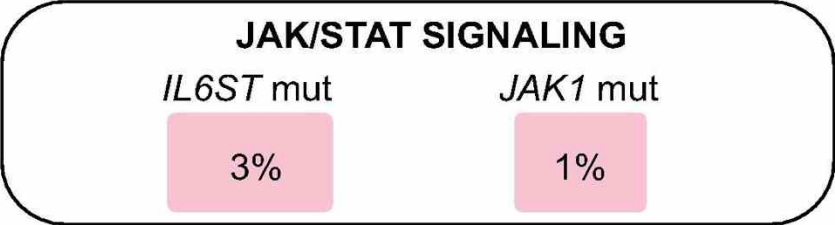
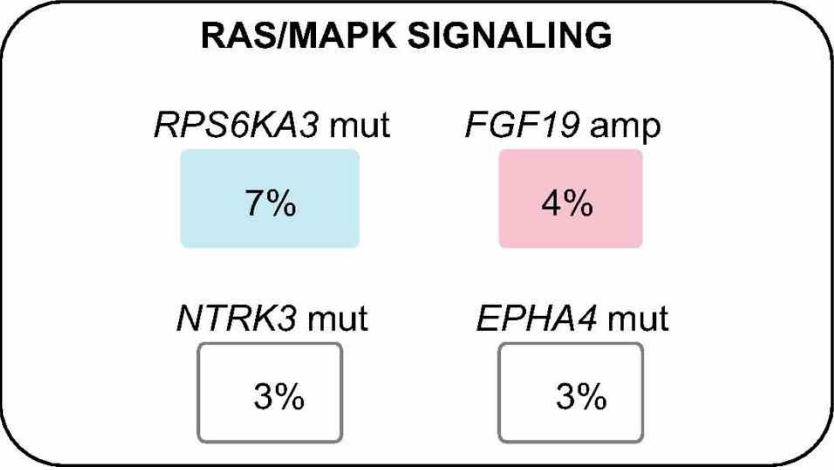
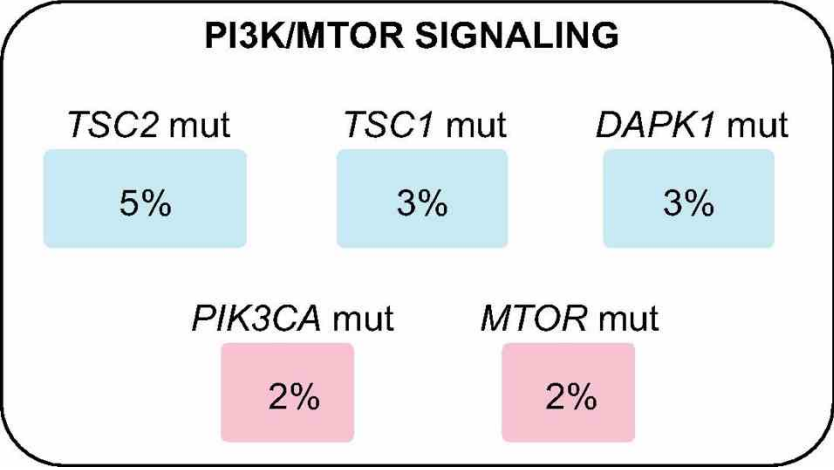
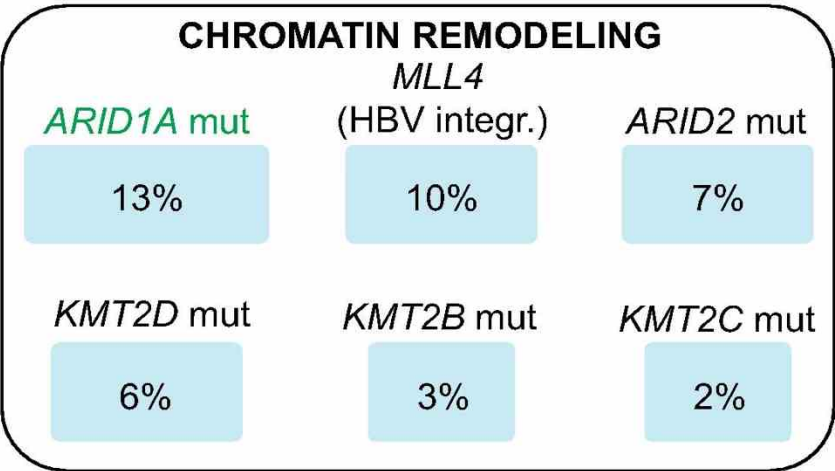
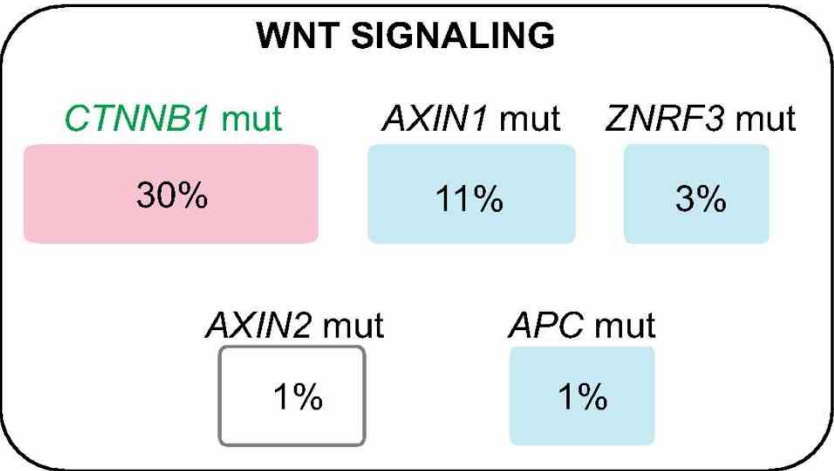
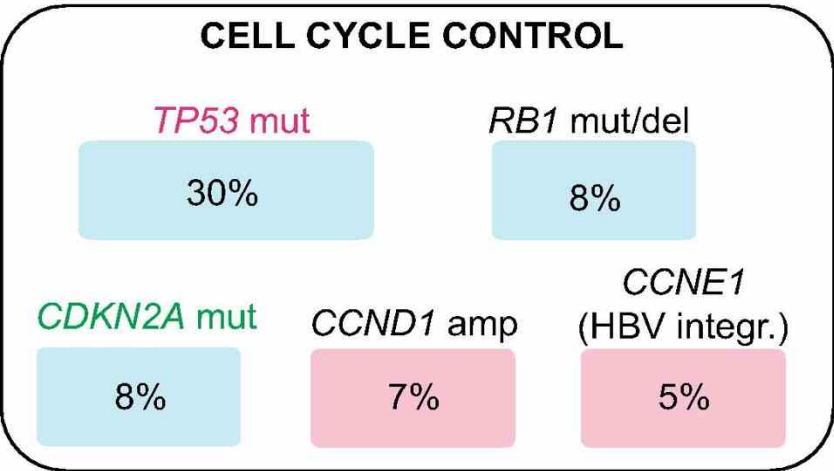
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Limited experiences: cases with CBL alteration, TSC alteration





Etiology enrichments
Alcohol
HBV



Research of next generation sequencing in liver cancer

Taiwan Cooperative Oncology Group (TCOG)

Pathology specimen
of hepatocellular
carcinoma

HBV (+) steatosis (+)	HBV (-) steatosis (+)
HBV (+) steatosis (-)	HBV (-) steatosis (-)

**Next-generation
sequencing:**
targeted gene panel
**Lipotoxic genetic
SNPs**

RNA-Seq
Transcriptomic analysis of
immune related genes

**Multiplex
immunofluorescence
staining**

N= 535 (ongoing study)

2.4% *TSC1*

2.1% *TSC2*

1.7% *VEGFA* (amplification)

1.3% *ERBB3*

1.1% *MET*

0.9% *ERBB2*

1 patient with *BRAF* fusion

Integration of new technologies in the multidisciplinary approach to primary liver tumours: The next-generation tumour board

— Jean-Charles Nault^{1,2,3,*}, Julien Calderaro^{4,5,6}, Maxime Ronot^{7,8}

