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Global Accessibility Awareness Day (GAAD) 2023

Section Menu

What Can We Do to Contribute to Digital Accessibility?

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US FDA Approves Roche's Elecsys GALAD Score to support earlier diagnosis of Cancer.

MediCircle / Innovations / March 06, 2020

> *“ The Elecsys GALAD score aims to support clinicians in diagnosing hepatocellular*

pISSN 2287-2728
eISSN 2287-285X

CLINICAL and MOLECULAR HEPATOLOGY

https://doi.org/10.3350/cmh.2023.0121
Clinical and Molecular Hepatology 2023;29:747-762

Original Article

Hepatocellular carcinoma prediction model performance decreases with long-term antiviral therapy in chronic hepatitis B patients

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Background/Aims: Existing hepatocellular carcinoma (HCC) prediction models are derived mainly from pretreatment or early on-treatment parameters. We reassessed the dynamic changes in the performance of 17 HCC models in patients with chronic hepatitis B (CHB) during long-term antiviral therapy (AVT).

Methods: Among 987 CHB patients administered long-term entecavir therapy, 660 patients had 8 years of follow-up data. Model scores were calculated using on-treatment values at 2.5, 3, 3.5, 4, 4.5, and 5 years of AVT to predict three-year HCC occurrence. Model performance was assessed with the area under the receiver operating curve (AUROC). The original model cutoffs to distinguish different levels of HCC risk were evaluated by the log-rank test.

Results: The AUROCs of the 17 HCC models varied from 0.51 to 0.78 when using on-treatment scores from years 2.5 to 5. Models with a cirrhosis variable showed numerically higher AUROCs (pooled at 0.65–0.73 for treated, untreated, or mixed treatment models) than models without (treated or mixed models: 0.61–0.68; untreated models: 0.51–0.59). Stratification into low, intermediate, and high-risk levels using the original cutoff values could no longer reflect the true HCC incidence using scores after 3.5 years of AVT for models without cirrhosis and after 4 years of AVT for models with cirrhosis.

Conclusions: The performance of existing HCC prediction models, especially models without the cirrhosis variable, decreased in CHB patients on long-term AVT. The optimization of existing models or the development of novel models for better HCC prediction during long-term AVT is warranted. **(Clin Mol Hepatol 2023;29:747-762)**

Keywords: Antiviral treatment; External validation; Prediction model; Carcinoma, hepatocellular; Hepatitis B, chronic

Study Highlights

- The performance of the 17 HCC prediction models decreased with the prolongation of antiviral therapy, with modest to poor AUROCs using on-treatment scores at year 2.5 to 5.
- Models containing the variable of cirrhosis showed higher predictive performance and decreased less profoundly than models without during late antiviral treatment.
- During long-term antiviral therapy, further optimization for existing HCC prediction models or development for novel models is justified.

MAYO CLINIC PROCEEDINGS

MAYO CLINIC

Safeguarding Against Stroke Risk by Statins

death than myocardial infarction (MI) among older Chinese people. Indeed, in this study, 1518 strokes and 515 MIs occurred during the 15 years of follow-up. And among older people of every nation, a nonfatal MI may be an inconvenience, whereas a nonfatal stroke is often a catastrophe.

So the present study by Lin et al provides important determinations with regard to the safety, benefit, and efficacy of statin therapy for individuals older than 75 years. The evidence for reduction in heart attack and cardiac death in younger individuals is robust and incontrovertible. Yet for primary prevention of heart attack and stroke in older people, the data are less secure. For example, in their 2022 statement, the US Preventive Services Task Force recommended statins for primary prevention—including stroke—for 40- to 75-year-old people but not for older populations.[2] In their *JAMA* publication, the authors state, "…current evidence is insufficient to assess the balance of benefits and

whether the people with lower achieved cholesterol levels—presumably with more attendances at their physician—had better control of blood pressure and diabetes than patients with higher cholesterol levels. This likely would influence stroke events. Yet in a way this does not matter: if treating older people with lipid-lowering drugs means more visits to their physician, nurse, or pharmacist with a big reduction on stroke (and heart attack), then such a finding emphasizes the importance of follow-up with health care professionals.

A less welcome finding from this survey was that very low achieved low-density lipoprotein (LDL) cholesterol levels below 40 mg/dL (to convert to mmol/L, multiply by 0.0259) seemed to increase the risk of hemorrhagic stroke. This was a small group of people, accounting for 6% of the study population, and so the authors suggest that a target LDL of about 40 to 75 mg/dL might be best. However, a large Danish study published very recently showed no evidence of

nature medicine

Article

https://doi.org/10.1038/s41591-023-

Acute blood biomarker profiles predict cognitive deficits 6 and 12 months after COVID-19 hospitalization

Received: 5 April 2023

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Post-COVID cognitive deficits, including 'brain fog', are clinically complex, with both objective and subjective components. They are common and debilitating, and can affect the ability to work, yet their biological underpinnings remain unknown. In this prospective cohort study of 1,837 adults hospitalized with COVID-19, we identified two distinct biomarker profiles measured during the acute admission, which predict cognitive outcomes 6 and 12 months after COVID-19. A first profile links elevated fibrinogen relative to C-reactive protein with both objective and subjective cognitive deficits. A second profile links elevated D-dimer relative to C-reactive protein with subjective cognitive deficits and occupational impact. This second profile was mediated by fatigue and shortness of breath. Neither profile was significantly mediated by depression or anxiety. Results were robust across secondary analyses. They were replicated, and their specificity to COVID-19 tested, in a large-scale electronic health records dataset. These findings provide insights into the heterogeneous biology of post-COVID cognitive deficits.

whole spectrum of values.

In summary, this prospective cohort study found two distinct dimensions linking acute blood biomarker profiles to post-acute cognitive profiles in patients hospitalized with COVID-19. A first dimension links raised fibrinogen relative to CRP with both objective and subjective cognitive deficits and might reflect immunothrombotic events with potential direct effects of fibrinogen on the brain. A second dimension links raised D-dimer relative to CRP with subjective but not objective cognitive deficits and with evidence of occupational impact. This dimension might reflect COVID-19-associated coagulopathy with thrombi in the cerebral or pulmonary vasculature. Mechanisms are speculative and further studies are needed to better delineate them. In the meantime, these biomarker profiles, based on routine blood tests, might help in the development of predictive models of post-COVID cognitive deficits, which could facilitate prognosis and accelerate research into management strategies.

Prevalence of MRI lesions in men responding to a GP-led invitation for a prostate health check: a prospective cohort study

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significant cancer and reduces overdiagnosis, with fewer biopsies. MRI as a screening tool has not been assessed independently of PSA in a formal screening study. We report a systematic community-based assessment of the prevalence of prostate MRI lesions in an age-selected population.

Methods and analysis Men aged 50–75 were identified from participating general practice (GP) practices and randomly selected for invitation to a screening MRI and PSA. Men with a positive MRI or a raised PSA density ($\geq 0.12\,ng/mL^2$) were recommended for standard National Health Service (NHS) prostate cancer assessment.

Results Eight GP practices sent invitations to 2096 men. 457 men (22%) responded and 303 completed both screening tests. Older white men were most likely to respond to the invitation, with black men having 20% of the acceptance rate of white men.

One in six men (48/303 men, 16%) had a positive screening MRI, and an additional 1 in 20 men (16/303, 5%) had a raised PSA density alone. After NHS assessment, 29 men (9.6%) were diagnosed with clinically significant cancer and 3 men (1%) with clinically insignificant cancer. Two in three men with a positive MRI, and more than half of men with clinically significant disease had a PSA <3 ng/mL.

Conclusions Prostate MRI may have value in screening independently of PSA. These data will allow modelling of the use of MRI as a primary screening tool to inform larger prostate cancer screening studies.

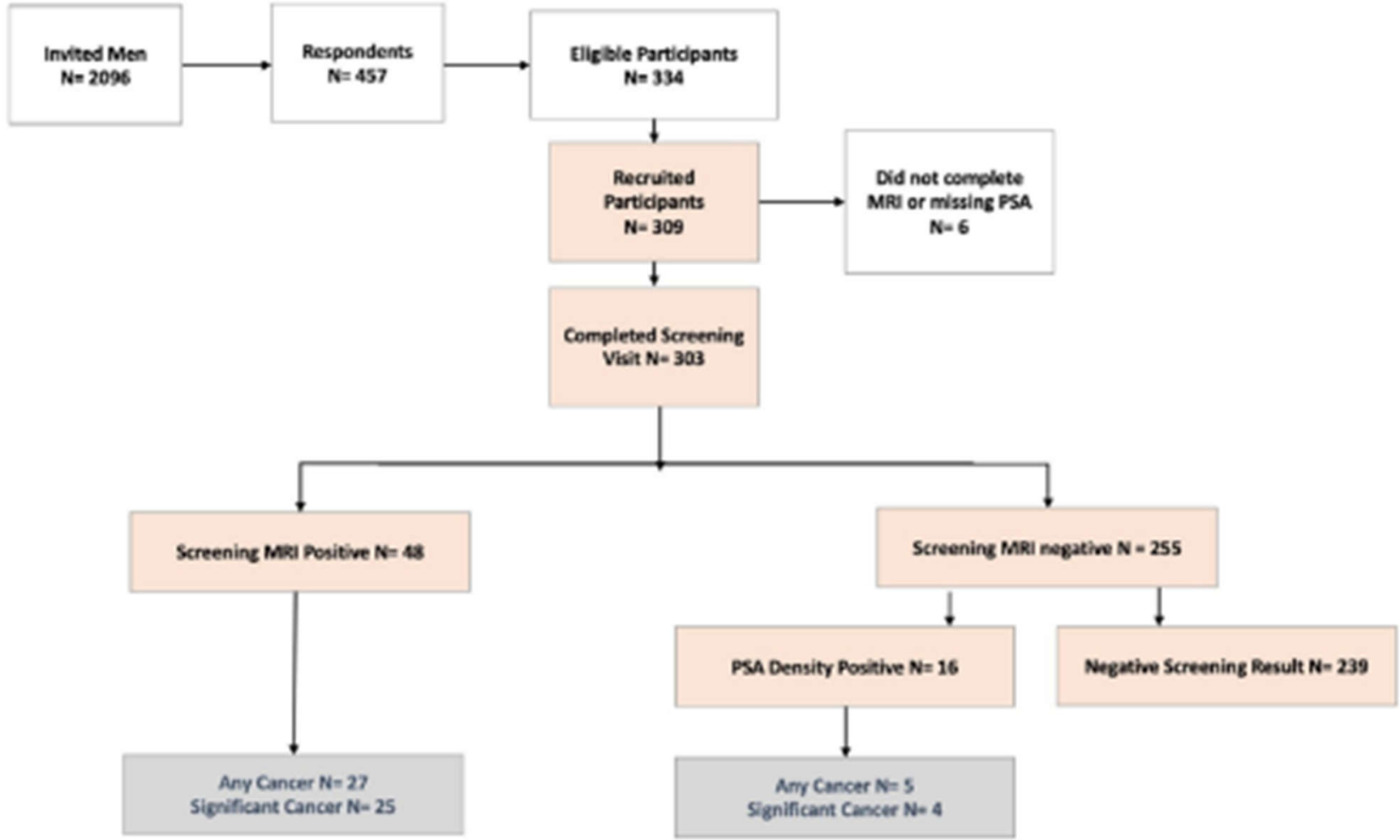

Figure 1 Study participant flowchart. PSA, prostate-specific antigen.

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WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ The European Randomised Screening for Prostate Cancer study used prostate-specific antigen (PSA) >3 ng/mL, or an abnormal digital rectal examination (DRE) to select men for a standard transrectal biopsy. The study reported a 20% reduction in prostate cancer mortality at 16 years but was associated with significant overdiagnosis and overtreatment.

⇒ Replacing standard transrectal biopsy with prostate MRI, and targeted biopsy in men with an MRI lesion, in men who have a high PSA, or abnormal DRE allows at least 1 in 4 men to avoid unnecessary biopsy, and reduces overdiagnosis and overtreatment.

WHAT THIS STUDY ADDS

⇒ We assess the prevalence of lesions on prostate MRI in men invited for a prostate health check. We found that 1 in 6 screened men had a lesion on MRI, and over half of the men with significant cancer on biopsy had a PSA <3 ng/mL. Less than 1% of screened men were 'overdiagnosed' with low-risk disease.

HOW THIS STUDY MIGHT AFFECT RESEARCH PRACTICE OR POLICY

⇒ We should evaluate the use of an MRI-led approach to prostate cancer screening in a larger UK population, to assess whether it could maintain the reduction in prostate cancer mortality of formal screening, while reducing overdiagnosis and associated over-

THE END