# PubMed Metadata for Query: COVID-19

## Hierarchical Agent Transformer Network for COVID-19 Infection Segmentation.

Authors: Tian Yi, Mao Qi, Wang Wenfeng, Zhang Yan

Abstract: Accurate and timely segmentation of COVID-19 infection regions is critical for effective diagnosis and treatment. While convolutional neural networks (CNNs) exhibit strong performance in medical image segmentation, they face challenges in handling complex lesion morphologies with irregular boundaries. Transformer-based approaches, though demonstrating superior capability in capturing global context, suffer from high computational costs and suboptimal multi-scale feature integration. To address these limitations, we proposed Hierarchical Agent Transformer Network (HATNet), a hierarchical encoder-bridge-decoder architecture that optimally balances segmentation accuracy with computational efficiency. The encoder employs novel agent Transformer blocks specifically designed to capture subtle features of small COVID-19 lesions through agent tokens with linear computational complexity. A diversity restoration module (DRM) is innovatively embedded within each agent Transformer block to counteract feature degradation. The hierarchical structure simultaneously extracts high-resolution shallow features and low-resolution fine features, ensuring comprehensive feature representation. The bridge stage incorporates an improved pyramid pooling module (IPPM) that establishes hierarchical global priors, significantly improving contextual understanding for the decoder. The decoder integrates a full-scale bidirectional feature pyramid network (FsBiFPN) with a dedicated border-refinement module (BRM), collectively enhancing edge precision. The HATNet were evaluated on the COVID-19-CT-Seg and CC-CCII datasets. Experimental results yielded Dice scores of 84.14% and 81.22% respectively, demonstrating superior segmentation performance compared to state-of-the-art models. Furthermore, it achieved notable advantages in model parameters and computational complexity, highlighting its clinical deployment potential.

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## Prenatal Cannabis Use and Depressive Symptoms.

Authors: Pitt Taylor L, Allshouse Amanda A, Kim Pilyoung, McMillin Gwen, Silver Robert M, Chung Judith H, Grobman William A, Haas David M, Mercer Brian M, Parry Samuel, Reddy Uma M, Saade George R, Simhan Hyagriv N, Metz Torri D

Abstract: To evaluate whether cannabis use during pregnancy was associated with depressive symptoms and whether ongoing use beyond the first trimester and higher amounts of cannabis use were associated with increased depressive symptoms.

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## Prediction of Hepatitis C Virus Perinatal Transmission in Pregnant Individuals With Hepatitis C Virus Infection.

Authors: Sandoval Grecio J, Saade George R, Hughes Brenna L, Clifton Rebecca G, Reddy Uma M, Bartholomew Anna, Salazar Ashley, Chien Edward K, Tita Alan T N, Thorp John M, Metz Torri D, Wapner Ronald J, Sabharwal Vishakha, Simhan Hyagriv N, Swamy Geeta K, Heyborne Kent D, Sibai Baha M, Grobman William A, El-Sayed Yasser Y, Casey Brian M, Parry Samuel, Macones George A, Prasad Mona,

Abstract: Our objective was to develop a prediction model for hepatitis C virus (HCV) infection perinatal transmission to improve triage for neonatal follow-up. This was a secondary analysis of HCV antibody-positive participants who were enrolled in the Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network multicenter observational study of HCV infection in pregnancy. Among 432 participants, the perinatal transmission rate was 6.0% (95% CI, 4.0-8.7%). The prediction model was developed and included two factors: maternal HCV RNA titer greater than 106 international units/mL and having had any antepartum bleeding. Using this model, the area under the curve for perinatal transmission was 0.76 (95% CI, 0.67-0.86). Probabilities of perinatal transmission of HCV infection ranged from 1.5% (a pregnant individual with HCV RNA 106 international units/mL or less and no antepartum bleeding) to 28.5% (a pregnant individual with an HCV RNA titer greater than 106 international units/mL and antepartum bleeding). Our results provide data to aid in clinical counseling of pregnant individuals with positive HCV antibodies. Additional research is needed to externally validate this prediction model.

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## Health Care, Mortality, and Declining Occupancy Rates in California Prisons, 2013-2023.

Authors: Adler Jessica L, Chen Weiwei

Abstract: None

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## Immigrant Inequities in Uninsurance and Postpartum Medicaid Extension: A Quasi-Experimental Study in New York City, 2016-2021.

Authors: Janevic Teresa, Birnie Lauren, Belfon Kizzi, Glenn Lily, Maru Sheela, Reynolds Simone, Eniola Folake, Kim Heeun, Howell Frances M, Fox Ashley, Weber Ellerie

Abstract: None

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