- Low-Dose Colchicine in Patients With Type 2 Diabetes and Recent Myocardial Infarction in the Colchicine Cardiovascular Outcomes Trial (COLCOT) | Diabetes Care | American Diabetes Association 2

within 30 days after a myocardial infarction.

RESULTS

There were 959 patients with T2D enrolled and monitored for a median of 22.6 months. A primary end point event occurred in 8.7% of patients in the colchicine group and in 13.1% in the placebo group (hazard ratio 0.65; 95% CI 0.44–0.96; *P* = 0.03). Nausea was reported in 2.7% and 0.8% in the study groups (*P* = 0.03), and pneumonia occurred in 2.4% and 0.4% (*P* = 0.008).

CONCLUSIONS

Among patients with T2D and a recent myocardial infarction, colchicine, 0.5 mg daily, leads to a large reduction of cardiovascular events. These results support the conduct of the COLCOT-T2D trial in primary prevention.

ORIGINAL ARTICLE FREE PREVIEW

A Cell-free DNA Blood-Based Test for Colorectal Cancer Screening

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positive cfDNA test and 16.9% had a negative test, which indicates a sensitivity of the cfDNA test for detection of colorectal cancer of 83.1% (95% confidence interval [CI], 72.2 to 90.3). Sensitivity for stage I, II, or III colorectal cancer was 87.5% (95% CI, 75.3 to 94.1), and sensitivity for advanced precancerous lesions was 13.2% (95% CI, 11.3 to 15.3). A total of 89.6% of the participants without any advanced colorectal neoplasia (colorectal cancer or advanced precancerous lesions) identified on colonoscopy had a negative cfDNA blood-based test, whereas 10.4% had a positive cfDNA blood-based test, which indicates a specificity for any advanced neoplasia of 89.6% (95% CI, 88.8 to 90.3). Specificity for negative colonoscopy (no colorectal cancer, advanced precancerous lesions, or nonadvanced precancerous lesions) was 89.9% (95% CI, 89.0 to 90.7).

CONCLUSIONS In an average-risk screening population, this cfDNA blood-based test had 83% sensitivity for colorectal cancer, 90% specificity for advanced neoplasia, and 13% sensitivity for advanced precancerous lesions. (Funded by Guardant Health; ECLIPSE ClinicalTrials.gov number, NCT04136002.)

Journal of Ultrasound in Medicine / Early View

Original Article

Serum miRNA Combined With Transvaginal Color Doppler Ultrasound Diagnosis Clinical Research on Cervical Cancer

Yan Wang MM, Jun Yang MM, Yin Wang MM

sequentially. The serum miR-18a, miR-130a, miR-92a and expression levels of the patients increased sequentially. Multivariate Logistic regression analysis showed that age, HR-HPV infection, menopause, blood flow RI, serum miRNA-18a, miRNA-92a, and miRNA-130a were the influencing factors of CC. receiver operating characteristic curve showed that the sensitivity, specificity, accuracy and area under curve of transvaginal Doppler ultrasound in the diagnosis of CC were 86.43%, 88.01%, 84.32%, and 0.913; serum miR-18a were, respectively, 76.56, 81.30, 80.36, and 0.839; serum miR-130a were 77.88%, 76.97%, 78.32%, and 0.0.864; serum miR-92a were 71.04%, 80.39%, 80.74%, and 0.894; 90.33%, 95.14%, 91.25%, and 0.947, the AUC of the combined detection of the 3 was greater than that of the single detection.

Conclusions

Serum miRNA combined with TVCDS has the advantages of non-invasive, high sensitivity and high specificity in the diagnosis of CC.

CLINICAL NEWS | ULTRASOUND

Coronary angiography matches IVUS in guiding PCI stent implantation

Original Investigation

ONLINE FIRST

March 13, 2024

Quantitative Coronary Angiography vs Intravascular Ultrasonography to Guide Drug-Eluting Stent Implantation

A Randomized Clinical Trial

Pil Hyung Lee, MD[1]; Soon Jun Hong, MD[2]; Hyun-Sook Kim, MD[3]; et al

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Results The trial included 1528 patients who underwent PCI with QCA guidance (763; mean [SD] age, 64.1 [9.9] years; 574 males [75.2%]) or IVUS guidance (765; mean [SD] age, 64.6 [9.5] years; 622 males [81.3%]). The post-PCI mean (SD) minimum lumen diameter was similar between the QCA- and IVUS-guided PCI groups (2.57 [0.55] vs 2.60 [0.58] mm, $P = .26$). Target lesion failure at 12 months occurred in 29 of 763 patients (3.81%) in the QCA-guided PCI group and 29 of 765 patients (3.80%) in the IVUS-guided PCI group (absolute risk difference, 0.01 percentage points [95% CI, −1.91 to 1.93 percentage points]; hazard ratio, 1.00 [95% CI, 0.60-1.68]; $P = .99$). There was no difference in the rates of stent edge dissection (1.2% vs 0.7%, $P = .25$), coronary perforation (0.2% vs 0.4%, $P = .41$), or stent thrombosis (0.53% vs 0.66%, $P = .74$) between the QCA- and IVUS-guided PCI groups. The risk of the primary end point was consistent regardless of subgroup, with no significant interaction.

Conclusions and Relevance Findings of this randomized clinical trial indicate that QCA and IVUS guidance during PCI showed similar rates of target lesion failure at 12 months. However, due to the lower-than-expected rates of target lesion failure in this trial, the findings should be interpreted with caution.

Proteomic Characterization Identifies Clinically Relevant Subgroups of Gastrointestinal Stromal Tumors

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BACKGROUND & AIMS: Gastrointestinal stromal tumor (GIST) is the most common mesenchymal tumor of the gastrointestinal tract, and it has high metastatic and recurrence rates. We aimed to characterize the proteomic features of GIST to understand biological processes and treatment vulnerabilities. **METHODS:** Quantitative proteomics and phosphoproteomics analyses were performed on 193 patients with GIST to reveal the biological characteristics of GIST. Data-driven hypotheses were tested by performing functional experiments using both GIST cell lines and xenograft mouse models. **RESULTS:** Proteomic analysis revealed differences in the molecular features of GISTs from different locations or with different histological grades. MAPK7 was identified and functionally proved to be associated with tumor cell proliferation in GIST. Integrative analysis revealed that increased SQSTM1 expression inhibited the patient response to imatinib mesylate. Proteomics subtyping identified 4 clusters of tumors with different clinical and molecular attributes. Functional experiments confirmed the role of SRSF3 in promoting tumor cell proliferation and leading to poor prognosis. **CONCLUSIONS:** Our study provides a valuable data resource and highlights potential therapeutic approaches for GIST.

60%

WHAT YOU NEED TO KNOW

BACKGROUND AND CONTEXT

Gastrointestinal stromal tumor (GIST) is the most common mesenchymal tumor of the gastrointestinal tract with high recurrence rates. The current risk stratification for gastrointestinal stromal tumors is still insufficient and controversial.

NEW FINDINGS

Proteomic and immune subtyping of gastrointestinal stromal tumors afforded a new paradigm to stratify patients into subtypes that were associated with clinical outcomes, therapy responses, and biological characteristics.

LIMITATIONS

The proteomic measurements did not fully consider the effects of intratumoral heterogeneity. Integrating single cell and spatial omics would be useful to explore the mechanism of gastrointestinal stromal tumor progression in the future.

CLINICAL RESEARCH RELEVANCE

This study highlights the importance of SQSTM1 in reducing gastrointestinal stromal tumor imatinib sensitivity, which might improve the clinical ability to predict the response of patients with gastrointestinal stromal tumors to imatinib treatment. Proteomic subtyping in this study might help to further identify the risk stratification of patients for relapse.

BASIC RESEARCH RELEVANCE

This study provides a large proteomic and phosphoproteomic integrated landscape of gastrointestinal stromal tumor that will serve as a rich resource for those studying gastrointestinal stromal tumors and for the larger research community, including for the development of targeted chemotherapy or immunotherapy.

THE END