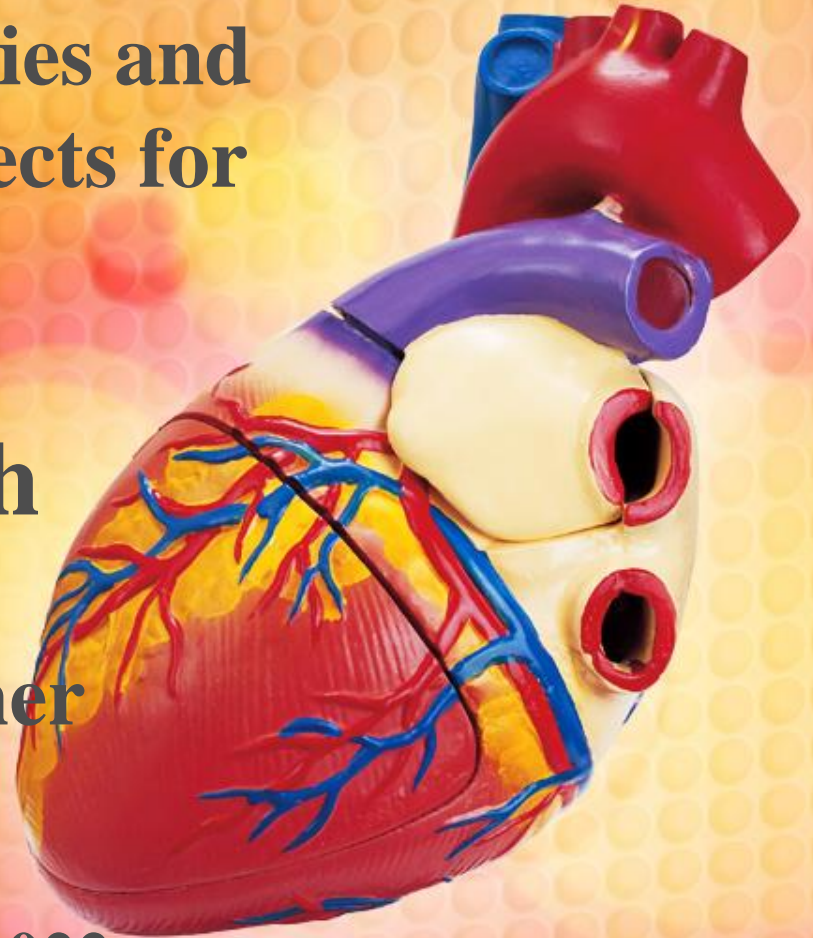


**Kharkiv national medical university, Ukraine**

Department of Academician L.T. Malaya Department of Internal  
Medicine No. 2, Clinical Immunology and Allergology

**Cardiovascular diseases in Ukraine  
in the conditions of hostilities and  
their consequences: prospects for  
scientific research**

**Mariia Koteliukh**  
PhD and  
postdoctoral researcher



**Kharkiv – 2022**

**Cardiovascular diseases (CVDs) are one of the leading causes of death in today's world. According to the World Health Organization, CVDs remain at the top of ten leading causes of death, was first inscribed in this list in 2020. CVD mortality rates increased by more than 2 million cases in 2019 compared to 2000 and reached 8.9 million cases worldwide. Acute myocardial infarction (AMI) is one of the most dangerous CVD and can be fatal. The mortality rate from coronary heart disease in 2020 in Ukraine was 157,605 per 100,000 population, which is 60% of all causes of death [Archive of State Statistics of Ukraine 2020].**



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## **The top 10 causes of death**

9 December 2020

In 2017, the prevalence of type 2 diabetes mellitus accounted for 8.8% of the world population, and it is projected to increase to 9.9% by 2045. In 2019, diabetes was the ninth out of ten-leading cause of death with an estimated 1.5 million deaths in the world.

DIABETES  
RESEARCH AND  
CLINICAL PRACTICE



FULL LENGTH ARTICLE | VOLUME 138, P271-281, APRIL 01, 2018

## IDF Diabetes Atlas: Global estimates of diabetes prevalence for 2017 and projections for 2045

N.H. Cho ✉ • J.E. Shaw ✉ • S. Karuranga ✉ • ... J.D. da Rocha Fernandes ✉ • A.W. Ohlrogge ✉ • B. Malanda ✉ •

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Published: February 26, 2018 • DOI: <https://doi.org/10.1016/j.diabres.2018.02.023> • [Check for updates](#)



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## The top 10 causes of death

9 December 2020

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Volume 26, Issue 2\_suppl  
1 December 2019

### The global epidemics of diabetes in the 21st century: Current situation and perspectives

Eberhard Standl ✉, Kamlesh Khunti, Tina Birgitte Hansen, Oliver Schnell

European Journal of Preventive Cardiology, Volume 26, Issue 2\_suppl, 1

December 2019, Pages 7–14,

<https://doi.org/10.1177/2047487319881021>

Published: 29 August 2020 [Article history ▾](#)

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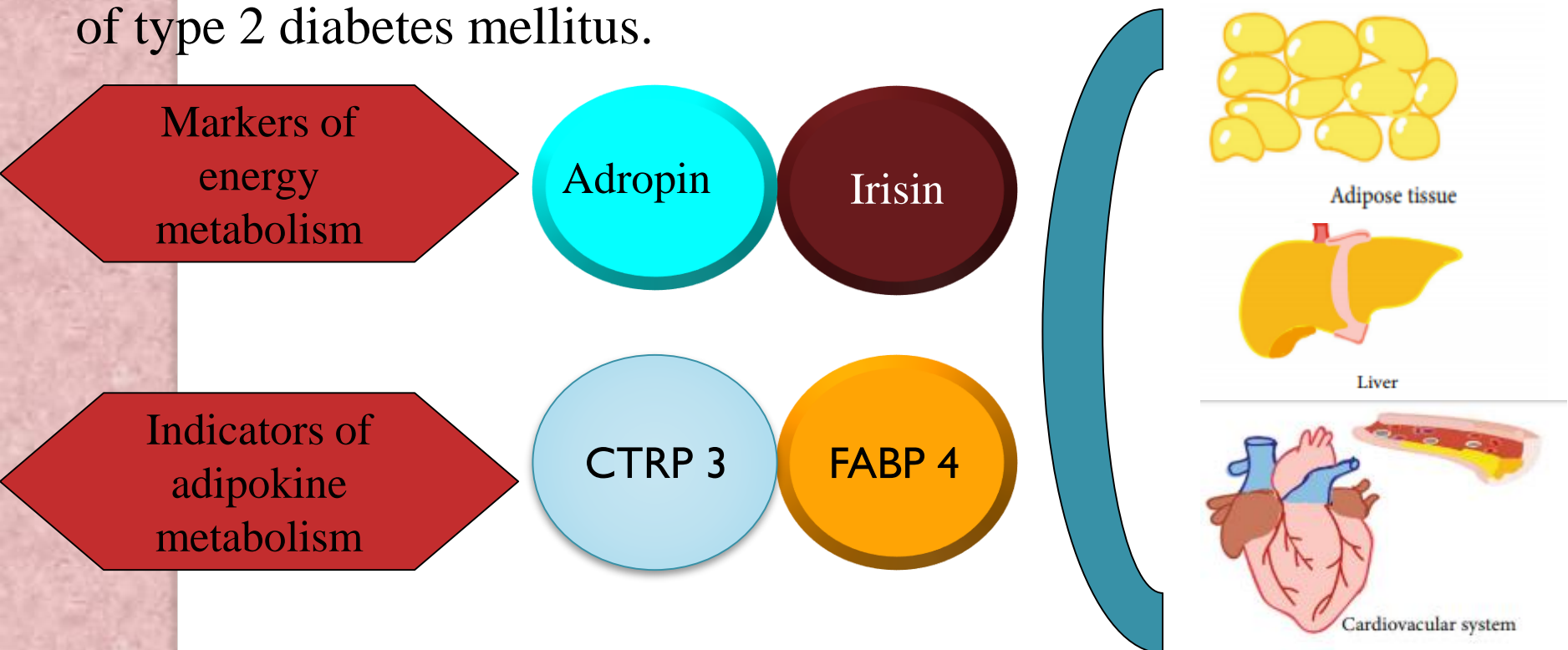
16

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- 
- ❖ Currently, intense fighting is occurring in Kharkiv and the Kharkiv region of Ukraine caused by Russian military aggression. Not only military but also civilians are bearing the brunt, as well as patients with chronic cardiovascular disease (including individuals with a history of myocardial infarction, hypertension, neurocirculatory dystonia with panic attacks).
  - ❖ The most important thing is that planned inpatient treatment is not available for such patients, so they are experiencing chronic stress and negative emotions, fears and worries about their own lives and the lives of loved ones, resulting in additional psychological and physical pressure and moral conflicts.
  - ❖ As a scientist and physician, I know that chronic cardiovascular disease-related deaths are primarily resulted from the combat situations in which these patients have been compelled to stay without proper medical care, adequate medication supply, timely nourishing food, rest and relaxation.

The study "Clinical and pathogenetic substantiation of diagnosis and treatment of acute myocardial infarction in patients with obesity and type 2 diabetes mellitus" was conducted in peacetime, but today it has become most relevant in hospital practice. The author has studied the markers of energy (adropin and irisin) and adipokine (C1q tumor necrosis factor-related protein 3 (CTRP3) and fatty acid binding protein 4 (FABP4)) metabolism in patients with acute myocardial infarction (AMI) depending on the presence or absence of type 2 diabetes mellitus.



# Predictive model for early complications of acute myocardial infarction in patients with type 2 diabetes mellitus

Archives of the Balkan Medical Union  
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vol. 57, no. 1, pp. 36-44  
March 2022

Mariia Yuriivna Koteliukh<sup>1,\*</sup>, Olena Hryhorivna Dorosh<sup>2</sup>

The study has also examined the possibility to predict the development of early and late AMI cardiovascular complications in patients with type 2 diabetes mellitus by taking into account these markers using the developed mathematical models. The researches have been presented in Scopus and Web of Science publications.

ORIGINAL PAPER

## A MODEL FOR PREDICTING LATE COMPLICATIONS OF MYOCARDIAL INFARCTION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

UDC 616.127-005.8-057.25-07:614.8.67.3  
DOI: 10.14739/2310-1210.2022.1.237534

Оригінальні дослідження

### Determination of the temporary disability duration in patients with acute myocardial infarction depending on the body mass index

M. Yu. Koteliukh<sup>ID\*</sup>

Kharkiv National Medical University, Ukraine

Prolonged temporary disability in patients with acute myocardial infarction (AMI) is more common in the presence of concomitant abnormalities. Adipokine C1q/TNF-related protein 3 (CTRP-3) is produced by adipose tissue and exhibits anti-inflammatory and cardioprotective properties. The course and prognosis of AMI depend on the presence of comorbid disorders and hence are objects of scientific interest.

**Aim.** To identify risk factors affecting the temporary disability duration in AMI patients depending on body mass index (BMI).

**Materials and methods.** The study involved 189 patients with ST-segment elevation AMI who were divided into 3 groups depending on BMI. The first group included 60 patients with AMI and normal BMI, the second group comprised 68 patients with AMI and excess body weight (EBW) and the third group was composed of 61 AMI patients with obesity. CTRP-3 was determined by enzyme-linked immunosorbent assay. Statistical data were processed using the licensed software package IBM SPSS Statistics

**Key words:** adipokine, myocardial infarction, disability, obesity, term.

Активация Windows  
Zaporozhye medical journal  
2022; 24 (1), 17-22

## CERTIFICATE

This is to certify that

**Assistant Professor M Koteliukh**  
(Kharkiv - Ukraine)

has presented an abstract entitled

**Prediction of late complications of acute myocardial infarction in diabetic patients**

*Authors: M Koteliukh (Kharkiv, UA)*

in the session entitled

**e-Posters session**

On Friday 18 March 2022, from 08:00 to 20:00

during the

**ESC Acute CardioVascular Care 2022**

in Marseille, France & Online

European Society of Cardiology

**Isabel Bardinot**  
Chief Executive Officer

- The report "Prediction of late complications of acute myocardial infarction in diabetic patients" was presented at the ESC Acute CardioVascular Care 2022, Marseille, France.
- The influence of these markers on the structural and functional state of the left ventricular myocardium in patients with AMI in comorbid conditions has been determined. The relationship between carbohydrate, lipid and energy metabolism in these patients has been studied. The percutaneous coronary intervention influence on the studied markers of energy and adipokine metabolism in AMI patients with comorbidity has been demonstrated.

# PROSPECTS FOR THE STUDY

- ✓ In spite of the difficult conditions in which my region has been involved, the university, where I study and conduct research, is working on priority areas in medicine. One of these areas is the examination of patients with myocardial infarction and comorbid conditions exposed to heavy fighting.
- ✓ Prospects for the study presented in the postwar period will reveal the consequences of additional weakened state of patients with previous myocardial infarction in the presence or absence of type 2 diabetes mellitus and obesity, model treatment and rehabilitation therapy as well as psychological support of patients.





THANKS FOR YOUR ATTENTION