

# "Digital save-health technologies in the comprehensive security of a modern human"

UK-Russia Security Dialogue – Global Health and Security

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Session 1: Lessons from the past (Via Zoom)

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# Information and technological paradigm: from Capitalism to Informationalism

We live in a new world, the features of which are strictly dictated by the laws of the information and technological paradigm, born of the progressive tendencies of **THE INFORMATIONALISM**, as a completely different way of social development, formed by the end of the 20th century under the influence of the restructuring of the capitalist mode of production, which transformed the high-tech material and technical base of the socio-economic organization into a new way of developing society.

A smartphone is, in fact, an integral life's part of a modern human, what guarantees him comprehensive security:

- 1) GPS-position;
- 2) Emergency communication;
- 3) Immediate receipt of the necessary information;
- 4) Storage of personal data;
- 5) Implementation of banking transactions;

...

And much more, including the possibility of obtaining comprehensive information about health yourself.

# m-Health

m-Health (mobile health) is an e-Health industry that includes medical services (monitoring, diagnostics and prevention of disease ) using mobile devices and wireless data transmission technologies. The main condition for using m-Health systems is the presence of a mobile device with Internet access.

e-Health (also written eHealth) is a relatively recent healthcare practice supported by electronic processes and communication, dating back to at least 1999. Usage of the term varies as it just not covers the "Internet medicine" as it was conceived during that time, but also covers "virtually everything related to computers and medicine“.

**Digital save-health technologies for COVID-19**

Covid19diagnosis.ru

**TYPES OF DIAGNOSTIC CONCLUSION**

**The probability that you will be diagnosed with COVID-19 is 95%. Seek medical attention immediately**

**You have a possible COVID-19 prodromal period. Take the PCR-test for SARS-CoV-2**

**You are highly likely to have a cold (catarrh), but COVID-19 is possible. To clarify diagnosis, take a PCR-test for SARS-CoV-2**

**You have not convincing clinical data for COVID-19**

**CONCLUSION ABOUT COVID-19 RESISTANCE**

Infectious process	Respiratory complications	Cardiovascular complications
No obvious infectious process	No respiratory complications	No cardiovascular complications
Mild form of an infectious process	Mild respiratory failure (functional type)	Mild circulatory failure (functional type)
Infectious process of average severity	Respiratory failure of average severity	Circulatory failure of average severity
Severe infectious process	Severe respiratory failure (ARDS)	Severe circulatory failure
Very hard severe infectious process	The high risk of developing pulmonary edema	The high risk of hemodynamic shock

# Patient 1, man 55 years old (two negative PCR tests for SARS-CoV-2; CT signs COVID-19; IgG 162,03 (10<

## DIAGNOSTIC CHECKLIST

Please, measure your body temperature and assess whether you have the following symptoms during the last 3-5 days:

Are you worried about sore or dryness throat?  Yes  No

Do you have recurring or persistent headaches that require relievers pain medicines?  Yes  No

Are you worried about severe physics weakness and fatigue?  Yes  No

Do you have any discomfort in the stomach like gastritis (pain, heartburn, belching)?  Yes  No

Are you worried about unpleasant sensations in the eyes like conjunctivitis (pain, redness, lacrimation, photophobia or feeling of a scattered sand)?  Yes  No

Are you concerned about a dry, unproductive cough?  Yes  No

Do you feel choking or short of breath when you are at rest?  Yes  No

Have you had a loss of smell (not to be confused with nasal congestion)?  Yes  No

Have you had a perversion or loss of taste?  Yes  No

Have you had a fever above 38 °C?  Yes  No

Body temperature

38.7

from 35 to 41 degrees Celsius

Calculate

You are highly likely to have a cold (catarrh), but COVID-19 is possible. To clarify diagnosis, take a PCR-test for SARS-CoV-2

## Start of disease: Cold (catarrh) vs COVID-19?

Symptom	Cold (catarrh)	COVID-19
Body temperature	<input type="radio"/> <37,5 C (38 and higher - rare)	<input checked="" type="radio"/> > 37,5 C (38 and above - as a rule)
Subjective sensations of high body temperature	<input checked="" type="radio"/> Chills (cold)	<input type="radio"/> Fever (heat)
Temperature reaction on nonsteroidal anti-inflammatory medicines	<input type="radio"/> Long term effective fall	<input checked="" type="radio"/> Short-term ineffective fall
Common condition of the prodromal period	<input type="radio"/> Mild weakness, fatigue from physical work	<input checked="" type="radio"/> Severe weakness, inability to perform physical work
Runny nose	<input type="radio"/> Yes	<input checked="" type="radio"/> No
Sneezing	<input type="radio"/> Often happens	<input checked="" type="radio"/> Rarely
Reaction of upper airway	<input type="radio"/> Catarrhal manifestations in the form of redness, swelling, rawness and pain	<input checked="" type="radio"/> No catarrhal symptoms (or minor)
Wheezing on breathing	<input type="radio"/> Buzzing or whistling in the projection of the trachea, or its bifurcation	<input checked="" type="radio"/> No
Cough	<input type="radio"/> Moist cough in the throat or tracheobronchial cough due to the sternum	<input checked="" type="radio"/> Dry cough coming from the peripheral parts of both lungs
Pulmonary obstruction	<input type="radio"/> Obstruction behind the sternum in the projection of the trachea and bronchial bifurcation	<input type="radio"/> Obstruction on the periphery of the lungs from the costal projection
Blood pressure	<input type="radio"/> Normal or low (90-100/50-60 mm Hg)	<input checked="" type="radio"/> Often high (150-160/90-100 mm Hg)
Heart rate	<input type="radio"/> Normal or mild tachycardia due to relative hypovolemia (65-90 bpm)	<input checked="" type="radio"/> Tendency to bradycardia on the background of hypervolemia (often <70 bpm)
Headache	<input type="radio"/> Infrequently, not heavy	<input checked="" type="radio"/> Very often, very painful
Appetite	<input checked="" type="radio"/> More often good	<input type="radio"/> More often absent
Total	Cold (catarrh) <b>2</b>	COVID <b>11</b>

# Patient 1, man 55 years old (two negative PCR tests for SARS-CoV-2, CT signs COVID-19, IgG 162,03 (10<))

## SCREENING OF COVID-19 RESISTANCE

Body height	Body weight	Age
<input type="text" value="175"/>	<input type="text" value="78"/>	<input type="text" value="55"/>
from 140 to 220 cm	from 40 to 130 kg	from 12 to 100 years old

Systolic component of arterial tension	Diastolic component of arterial tension
<input type="text" value="142"/>	<input type="text" value="90"/>
from 40 to 220 mmHg.	from 10 to 130 mmHg.

Heart Rate	Respiration Rate	Body temperature
<input type="text" value="57"/>	<input type="text" value="24"/>	<input type="text" value="38,7"/>
from 40 to 140 bpm	от 4 до 28 rpm	from 35 to 41 degrees Celsius

Calculate basic parameters

## Individual resistance to COVID-19

35

Severe infectious process

Respiratory failure of average severity

Mild circulatory failure (functional type)

The presence of at least one of the indicators in the red and black zones, combined with an increasing probability of COVID-19, is an absolute indication for inpatient treatment

## CONTRA-EPIDEMIC MEMORANDUM

## PREVENTION AND TREATMENT OF COVID-19

Лучевая диагностика: 10.12.20 Рентгенография грудной клетки. На обзорной рентгенограмме органов грудной клетки в прямой и левой боковой проекциях - слева в среднем отделе, справа в нижнем отделе определяется немногочисленное неомогенное понижение прозрачности легочного фона, без четких наружных контуров, с ретикулярными изменениями. Корни легких бесструктурный. Левый корень малоструктурный. Синусы плохо дифференцируются.

Тень сердца несколько расширена влево. Аорта уплотнена. Достоверно данных за пневмоторакс не выявлено. Рг-признаки течения двусторонней пневмонии в стадии частичного разрешения.

04.12.20 Компьютерная томография грудной полости. В паренхиме S 1,2,3,4,5,6,8,9,10 сегментах правого легкого определяются множественные перибронхиальные и субплевральные зоны уплотнения по типу матового стекла и субплевральные участки ретикулярных уплотнений.

В паренхиме S1-2,3,4,5,6,8,9,10 сегментах левого легкого определяются множественные перибронхиальные и субплевральные зоны уплотнения по типу матового стекла и субплевральные участки ретикулярных уплотнений.

В S9 сегменте правого легкого выявляется округлое узловое образование с четкими контурами до 8,8мм в наибольшем измерении. Бронхи дифференцируются до уровня субсегментов. Сердце обычных размеров и конфигурации. Аорта и магистральные сосуды не расширены, с четкими контурами. В средостении увеличенных лимфоузлов и дополнительных объемных образований не выявлено. В плевральных полостях жидкость не определяется. Костных травматических изменений в зоне исследования не определяется.

КТ-картина двусторонней полисегментарной пневмонии, высокая степень вероятности вирусной пневмонии.

По выраженности рентгенологических признаков - средне-тяжелая степень (КТ-3).

Поражение легочной ткани-правое легкое- до 60%, левое легкое- до 55 %

Единичное узловое образование в S9 сегменте правого легкого (требуется динамическое наблюдение через 3-6мес).

УЗИ: 08.12.20 Эхокардиография в В- и М- режиме с доплеровским анализом. В- и М- режим: Визуализация снижена.

Принято ПЦР COVID-19 17346259 Мазок/отделяемое из носоглотки и ротоглотки Исследование выполнено по пробе 2020-12-04 2020-12-04 Не обнаружено

ПЦР COVID-19 17700140 Мазок/отделяемое из носоглотки и ротоглотки Исследование выполнено по пробе 2020-12-08 2020-12-08 Не обнаружено

ИМГ COVID-19 17346274 Кровь, цельная (сыворотка) Исследование выполнено по пробе 2020-12-04 2020-12-04 nCoV IgM: 6.96 (<2) nCoV IgG: 162.03 (<10)

М.П.

Лечащий врач:



Blank lines for signatures and dates, with some faint handwritten marks.

# Patient 2, woman 73 years old (rapid enzyme-linked immunosorbent assay SARS-CoV-2 **negative**)

## DIAGNOSTIC CHECKLIST

Please, measure your body temperature and assess whether you have the following symptoms during the last 3-5 days:

Are you worried about sore or dryness throat?  Yes  No

Do you have recurring or persistent headaches that require relievers pain medicines?  Yes  No

Are you worried about severe physics weakness and fatigue?  Yes  No

Do you have any discomfort in the stomach like gastritis (pain, heartburn, belching)?  Yes  No

Are you worried about unpleasant sensations in the eyes like conjunctivitis (pain, redness, lacrimation, photophobia or feeling of a scattered sand)?  Yes  No

Are you concerned about a dry, unproductive cough?  Yes  No

Do you feel choking or short of breath when you are at rest?  Yes  No

Have you had a loss of smell (not to be confused with nasal congestion)?  Yes  No

Have you had a perversion or loss of taste?  Yes  No

Have you had a fever above 38 °C?  Yes  No

Body temperature

38.5

from 35 to 41 degrees Celsius

Calculate

You are highly likely to have a cold (catarrh), but COVID-19 is possible. To clarify diagnosis, take a PCR-test for SARS-CoV-2

## Start of disease: Cold (catarrh) vs COVID-19?

Symptom	Cold (catarrh)	COVID-19
Body temperature	<input type="radio"/> <37,5 C (38 and higher - rare)	<input checked="" type="radio"/> > 37,5 C (38 and above - as a rule)
Subjective sensations of high body temperature	<input checked="" type="radio"/> Chills (cold)	<input type="radio"/> Fever (heat)
Temperature reaction on nonsteroidal anti-inflammatory medicines	<input checked="" type="radio"/> Long term effective fall	<input type="radio"/> Short-term ineffective fall
Common condition of the prodromal period	<input checked="" type="radio"/> Mild weakness, fatigue from physical work	<input type="radio"/> Severe weakness, inability to perform physical work
Runny nose	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Sneezing	<input checked="" type="radio"/> Often happens	<input type="radio"/> Rarely
Reaction of upper airway	<input checked="" type="radio"/> Catarrhal manifestations in the form of redness, swelling, rawness and pain	<input type="radio"/> No catarrhal symptoms (or minor)
Wheezing on breathing	<input type="radio"/> Buzzing or whistling in the projection of the trachea, or its bifurcation	<input type="radio"/> No
Cough	<input checked="" type="radio"/> Moist cough in the throat or tracheobronchial cough due to the sternum	<input type="radio"/> Dry cough coming from the peripheral parts of both lungs
Pulmonary obstruction	<input checked="" type="radio"/> Obstruction behind the sternum in the projection of the trachea and bronchial bifurcation	<input type="radio"/> Obstruction on the periphery of the lungs from the costal projection
Blood pressure	<input checked="" type="radio"/> Normal or low (90-100/50-60 mm Hg)	<input type="radio"/> Often high (150-160/90-100 mm Hg)
Heart rate	<input checked="" type="radio"/> Normal or mild tachycardia due to relative hypovolemia (65-90 bpm)	<input type="radio"/> Tendency to bradycardia on the background of hypovolemia (often <70 bpm)
Headache	<input type="radio"/> Infrequently, not heavy	<input checked="" type="radio"/> Very often, very painful
Appetite	<input checked="" type="radio"/> More often good	<input type="radio"/> More often absent
Total	Cold (catarrh) <b>11</b>	COVID <b>2</b>

# Patient 2, woman 73 years old (rapid enzyme-linked immunosorbent assay SARS-CoV-2 **negative**)

### SCREENING OF COVID-19 RESISTANCE

Body height	Body weight	Age
<input type="text" value="157"/>	<input type="text" value="57"/>	<input type="text" value="73"/>
<small>from 140 to 220 cm</small>	<small>from 40 to 130 kg</small>	<small>from 12 to 100 years old</small>

Systolic component of arterial tension	Diastolic component of arterial tension
<input type="text" value="120"/>	<input type="text" value="80"/>
<small>from 40 to 220 mmHg.</small>	<small>from 10 to 130 mmHg.</small>

Heart Rate	Respiration Rate	Body temperature
<input type="text" value="70"/>	<input type="text" value="18"/>	<input type="text" value="38.1"/>
<small>from 40 to 140 bpm</small>	<small>от 4 до 28 rpm</small>	<small>from 35 to 41 degrees Celsius</small>

**Calculate basic parameters**

### Individual resistance to COVID-19

81

**Infectious process of average severity**

**No respiratory complications**

**No cardiovascular complications**

The presence of at least one of the indicators in the red and black zones, combined with an increasing probability of COVID-19, is an absolute indication for inpatient treatment

### CONTRA-EPIDEMIC MEMORANDUM

**PREVENTION AND TREATMENT OF COVID-19**

f WhatsApp VK Telegram Print Messenger Twitter Help

# Patient 3, woman 48 years old (rapid enzyme-linked immunosorbent assay SARS-CoV-2 **positive**)

## REINFECTION

DIAGNOSTIC CHECKLIST

Please, measure your body temperature and assess whether you have the following symptoms during the last 3-5 days:

Are you worried about sore or dryness throat?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Do you have recurring or persistent headaches that require relievers pain medicines?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are you worried about severe physics weakness and fatigue?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Do you have any discomfort in the stomach like gastritis (pain, heartburn, belching)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are you worried about unpleasant sensations in the eyes like conjunctivitis (pain, redness, lacrimation, photophobia or feeling of a scattered sand)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are you concerned about a dry, unproductive cough?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Do you feel choking or short of breath when you are at rest?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Have you had a loss of smell (not to be confused with nasal congestion)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Have you had a perversion or loss of taste?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Have you had a fever above 38 °C?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Body temperature

i

from 35 to 41 degrees Celsius

Calculate

You have a possible COVID-19 prodromal period. Take the PCR-test for SARS-CoV-2

# Digital save-health technologies for REHABILITATION

[www.powerreserve.ru](http://www.powerreserve.ru)

People who have recovered from COVID-19 in moderate and severe form will require complex medical rehabilitation due to the development of severe cardiovascular, neurological and respiratory complications caused by the new coronavirus infection, as well as suffering in the reproductive sphere, which will lead to a pronounced deterioration in the demographic situation in the World.

## Скрининг здоровья и биологического возраста

"Неважно, как ты упал. Важно, как ты поднялся."  
Доктор В. Савостьянов

Рост

175

от 140 до 220 см

Вес

86.3

от 40 до 130 кг

Возраст

64

от 12 до 100 лет

Систолическое давление

144

от 40 до 220 мм рт.ст.

i

Диастолическое давление

89

от 10 до 130 мм рт.ст.

i

Пульс

72

от 40 до 140 уд/мин

i

Дыхание

20

от 4 до 28 вдохов/мин

i

Рассчитать базовые параметры

Ваш "Запас Здоровья"

40

Преморбидный фон

КАРДИОВАСКУЛЯРНЫЙ РИСК

Средняя степень

КАРДИОРЕСПИРАТОРНЫЙ РИСК

Средняя степень

ЭНДОКРИННО-МЕТАБОЛИЧ. РИСК

Средняя степень

Простой функциональный тест

Задержка дыхания на вдохе

53

от 0 до 120 сек

i

Статическая балансировка

23

от 0 до 120 сек

i

Заполнить анкету

Вы стараетесь избегать прямых солнечных лучей?

Да Нет

Считаете ли Вы, что Ваша работоспособность снизилась?

Да Нет

Бывают ли у Вас такие периоды, когда Вы чувствуете себя угнетённым, подавленным?

Да Нет

Считаете Вы себя заболевшим?

Да Нет

Рассчитать биологический возраст

Индекс массы тела

Избыточный вес - I

Рекомендуемый максимальный пульс

153 уд/мин

Биологический возраст

54

Основной обмен

1688 ккал/день

Periculum mortis

Максимальный

# [www.covid19diagnosis.ru](http://www.covid19diagnosis.ru)

Digital screening on-line diagnostics of COVID-19 is a high-tech method for the early active detection of COVID-19 and aggravating risk factors for its development, based on the use of special diagnostic self-examination, consisting of comprehensive testing and mathematical prediction of regulatory biological processes of maintaining homeostasis when infected with SARS -CoV-2.

The main idea of "covid19diagnosis.ru" is understanding what is happening and what can be expected if develops COVID-19. Regular monitoring of the user's individual resistance to COVID-19 will help prevent the development of severe complications of this disease. Which means that human will be ill in a mild form. This is important, because severe forms of COVID-19 require heavy and expensive medical rehabilitation, after which (as today's scientific data show) not everyone comes full social adaptation.

**Such Internet resources should be free for absolutely all users!**