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**REPORT**  
**on research results of**  
**computed-aided diagnostic system for health monitoring**  
**Dynamics-100**

Zaozersk

2000

**Work objective** – examination of possibilities and assessment of application

efficiency of hardware and software complex Dynamics-100 for solution of the following tasks:

- 15 express assessment of general condition of military population and members of their families residing in the Far North areas;
- 16 condition dynamics control in military population during in-patient examination and treatment;
- 17 assessment of psychoemotional condition and stress prognosis in military population.

The examination was conducted in the period from December 27, 1999 till November 28, 2000 in the department of functional diagnostics of the naval hospital in the town of Zaozersk.

**Contingent of the examined:**

- 18 patients of the hospital departments;
- 19 staff.

**Age category:** 10-60 years old.

The total of 214 examinations have been conducted in 152 patients (thereof 7 children).

**DISTRIBUTION OF THE PATIENTS BY THE MAIN NOSOLOGICAL ENTITIES**

| # | Clinical diagnosis and groups of diseases | Number of examined | Number of examinations |
|---|---|--------------------|------------------------|
| 1 | Apparently healthy                        | 52                 | 72                     |
| 2 | Blood circulation organ diseases          | 37                 | 42                     |
| 3 | Respiratory system diseases               | 5                  | 8                      |
| 4 | Nervous system diseases, mental disorders | 34                 | 50                     |
| 5 | Gastric polyp and peptic ulcer disease    | 19                 | 35                     |
| 6 | Hysteromyoma                              | 4                  | 6                      |
| 7 | Rectal cancer                             | 1                  | 1                      |
| 8 | Total:                                    | 152                | 214                    |

- 20 in three patients examination by Dynamics-100 system did no bring any results due to atrial fibrillation and ventricular arrhythmia.

**RESULTS:**

- 21 in the group of apparently healthy 35 examined showed incompliance of the functional state of the body with the norm, low adaptation level, nervous stress signs. The other patients functional state of the body conforms with the norm.
- 22 in 8 patients with diseases of the blood circulation organs and respiratory system insignificant deviations of the functional state of the body from the norm were detected.
- 23 in the group of patients with nervous system diseases and mental disorders 5 examined showed incompliance of the functional state of the body to the norm, nervous stress and depression signs.
- 24 the patients with gastric diseases had increased influence of the parasympathetic part of the vegetative nervous system.
- 25 in one patient with confirmed rectal cancer (burdened genetic background for cancer) during examination by Dynamics-100 signs of pathological changes and complete exhaustion of energy resources were detected.
- 26 during examination of the children by Dynamics-100 4 of 7 examined showed signs of nervous stress and decrease of energy resources.

## **CONCLUSIONS**

1. Diagnostic system Dynamics-100 has a rapid response for assessment of the main body system condition.
2. Simplicity and safety of patient examination allow to conduct case follow-up repeatedly both in hospitals and field conditions.
3. The system may be used for screening preventive examination programs in population for assessment of their psychoemotional status and stress prognosis in military population and persons residing in the Far North areas.

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