

KLINIK LABORATOR DIAGNOSTIKADA INNOVATSION TEXNOLOGIYALARDAN FOYDALANISH, MUAMMOLAR VA YECHIMLAR xalqaro ilmiy-amaliy anjuman 18 aprel 2023 yil





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Klinik laborator diagnostikada innovatsion texnologiyalardan foydalanish, muammolar va yechimlar<u>. 2023</u>

| bog'liq kranial polinevropatiyalarning diagnostik xususiyatlari | 328 |
|---|-----|
| Muminov O.A., Kurbonova Z.Ch. Covid-19 klinik kechishining oʻziga xos xususiyatlari | 329 |
| Muminov O.A., Kurbonova Z.Ch. Covid-19 etiologiyasi va patogenetik mexanizmlari | 331 |
| Musayeva N.B., Islamova Z.S. Hemostasiological changes in rheumatoid arthritis | 332 |
| Mustanov J.A., Rasulov SH.M. Teri leyshmaniozini tashxislashda klinik va laborator tekshirishlarning ahamiyati | 334 |
| Nishonov A.A., Nuriddinova N.F. Laborator diagnostikada it texnologiyalarni joriy qilinishi | 336 |
| nologies in clinical laboratories | 337 |
| Otayeva G.A, Ibaydullayeva B.R., MaxmudovaA.Yu., Kasimova E.A., Salimjonova D.X. Oʻpka kasalliklarining asoratlari kelib chiqishi va kasallik chaqiruvchi omillari | 339 |
| Poʻlatov M.Q, Rashidova N.S. Migren bilan kasallangan bemorlarda bosh miya oʻzgarishlarini magnit rezonans tomografiya tekshiruvi orqali baxolash | 341 |
| Qaraxonova S.A, Murodov G'.X, Ernaeva G.X. Xavotirli-fobik sindromda psixokorreksiya | 342 |
| Qaraxonova S.A, Ernaeva G.X. Taekvondo sportchilarida musobaqadan oldingi psixodiagnostik tekshiruvlarning axamiyati | 342 |
| Qurbanova G.Ch., Babadjanova Sh.A. Diffuz toksik buqoq klinik simptomlari | 344 |
| xususiyatlari | 346 |
| Qurbanova G.Ch., Babadjanova Sh.A. Diffuz toksik buqoqda giperkoagulyasiyaning patogenetik aspektlari | 348 |
| Qurbonova S.Y., Murodova I.A., Yoʻldasheva S.M. St.Aureus patogen shtammlaridan zardob olish tehnologiyasi | 350 |
| Qutlimuratov I.Sh. Immunoglobulin e klinik ahamiyati | 350 |
| Rahimova Sh.M., Saidvaliyev F.S. Birlamchi bosh ogʻriqlaridagi abuzus bosh ogʻrigʻining klinik-nevrologik xususiyatlari | 352 |
| Rakhimbaeva G.S., Mallaev F.S. The role of atherocalcinosis in the development of atherothrombotic subtype of ischemic stroke. Management of medical treatment tactics | 353 |

laboratoriya texnologlari va texnik xodimlari soni keyingi o'n yil ichida laboratoriya xizmatlariga bo'lgan talabga qadam qo'yishi kutilmasligini taxmin qilmoqda. Bu esa klinik labaratoriya sohasida ham IT tehnalogiyalarini joriy qilinishi bilan uzviy bog'liqdur.Ayniqsa, sitogenetika, to'qimalarni yozish, genetik tekshiruv va transplantatsiya sohalarida

Xulosa. IT tehnalogiyalari rivojlanayotgan davrda laboratoriya xarajatlaridagi eng katta tejash mehnatni kamaytirish imkonini beruvchi texnologiyadan kelib chiqmoqda. Mehnatga boʻlgan ehtiyojni kamaytirish sinovlarni oʻtkazish xarajatlariga katta ta'sir koʻrsatishi mumkin, chunki mehnat laboratoriya xizmatlari umumiy tibbiyot narxining taxminan 60 foizini tashkil etadi.Xulosa qilib aytganda, klinik labaratoriyalarda IT texnalogiyalarni joriy qilinishi labaratoriyalar hamda sogʻliqni saqlash tizimlarini rivojlanishiga asos boʻlib xizmat qiladi.

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IMPLEMENTATION OF INNOVATIVE TECHNOLOGIES IN CLINICAL LABORATORIES

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Annotation: Laboratory medicine is integral to health and health care and relies on many analytical methods to provide timely, objective information to health professionals to promote disease prevention, diagnosis, treatment and

monitoring. Recent technological advances, based on and defined by a culture of innovation, have transformed modern laboratory medicine, adding significant value and visibility to its role in health and clinical decision making. Laboratory automation, genomics, nuclear magnetic resonance spectroscopy, spectrometry, microfluria, and the attentional innovations in electronic media have changed the face of omiks research. The growing application of these technologies, as well as their integration with microtechnology and care point testing, has contributed to improved patient outcomes and narrowing of the clinical-laboratory interface to facilitate a patient-focused approach to health. However, to make sufficient use of these breakthroughs, new tools such as artificial intelligence and data mining are needed to exploit the exciting potential of medical big data obtained from these new techniques. The current review provides an overview of recent technological advances in laboratory medicine, with a critical discussion on their clinical utility and future prospects. Also, the promise and potential of accurate and personalized medicine will be discussed and assessed. Particular attention is paid to the uncertainty of its success in terms of advanced information technology capabilities.

Keywords: Laboratory medical amortization medicinebiotechnology

By providing health care professionals with targeted information on disease prevention, risk assessment, diagnosis, prognosis, treatment and patient control, laboratory medicine plays an integral role in health care, providing safe, appropriate and effective clinical decision-making. In recent years, major technological advances in laboratory medicine have greatly improved clinical laboratory diagnostics and monitoring, further improving the quality of patient care. In turn, these technological innovations have added tangible value to laboratory medicine in the field of health care.

Traditionally, clinical chemistry, hematology, and microbiology testing were extremely laborious for lab staff, who were responsible for the many steps involved in the analytical process, ranging from taking a biological sample to eventually discarding it. In recent decades, mostly automated analyzers have been adopted in clinical chemistry and hematology laboratories, which have increased the effectiveness, costs and errors of laboratory tests more broadly. In addition, notable analytical advances in genetics and genomics, nucleus magnetic resonance (NMR) spectroscopy, mass spectrometry (MS), and microfluidics led to an increase in laboratory automation to promote a new era of laboratory medicine. Indeed, the development and evolution of the next generation and single-celled sequencing revolutionized the field of genomics and transcription to allow whole genome DNA and RNA sequencing with high production and low cost. Proteomics and metabolomics are now defined by advances in NMR and MS technologies and expand their application across multiple clinical disciplines. Furthermore, the new application of microfluid technology was readily applied to several laboratory tools, including laboratory-on-a-chip technology, single cell omics research, and maintenance point testing (POCT) devices. POCT systems are also uniquely positioned to take advantage of technological advances made in laboratory medicine and to adapt them to the size of an explosive or miniature to

be used in nearby patient settings. In addition, advances in bioinformatics and information technology are developing simultaneously. Indeed, the output of big data from advanced analytical methods must be compatible with sophisticated machine learning and artificial intelligence (AI) suitable for data extraction and indepth research. Moreover, a culture of innovation within laboratory medical technology and advanced AI could pave the way for a clear and personalized era of medicine, adding significant value to the critical role of the laboratory in health provision. In this review, we will discuss the latest technological advances in the field of laboratory medicine, including their clinical development, current challenges and opportunities for future approaches.

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OʻPKA KASALLIKLARINING ASORATLARI KELIB CHIQISHI VA KASALLIK CHAQIRUVCHI OMILLARI

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Oʻpka kasalliklaridan Pnevmoniya 5 yoshgacha boʻlgan bolalar oʻlimining 15 foizini tashkil qiladi. Pnevmoniyadan oʻlim holati Afrikadagi Saxara choʻlining janubida eng yuqori koʻrsatkichni tashkil qiladi.

Maqsadi: Pnevmoniyani turli mikroorganizmlar yordamida kelib chiqishining oʻziga xos xususiyatlarini tahlil qilish.

Olingan natijalar: Pnevmoniya oʻpka toʻqimasining yalligʻlanish jarayonidir. Kasallikning rivojlanishi uchun mas'ul mikroorganizmlarning bir