A software for automatic calculation of tubular extraction rate

Author Block: J. L. GOMEZ-PERALES¹, A. GARCIA-MENDEZOA²;
¹Servicio Andaluz de Salud, Cádiz, SPAIN, ²Hospital Torrecárdenas. Servicio Andaluz de Salud, Almería, SPAIN.

Abstract:
Introduction: Although the renal clearance of ⁹⁹ᵐTc-MAG3 is about 60% of the ¹³¹I-hippurate clearance, ⁹⁹ᵐTc-MAG3 clearance may be useful to estimate effective renal plasma flow. Russell’s algorithm and Bubeck’s algorithm are widely used for calculation of ⁹⁹ᵐTc-MAG3 clearance with a single blood sample. The calculation of the ⁹⁹ᵐTc-MAG3 clearance using these algorithms is not very complex, but tedious and time-consuming.
Objective: The goal of this work is to develop a computing facility to automatically calculate ⁹⁹ᵐTc-MAG3 clearance, using Russell’s algorithm and Bubeck’s algorithm.
Materials and methods: For developing a software incorporating these calculations we have used Visual Basic 6.0 and Visual Studio Installer.
Results: We have developed a form for automatic calculation of ⁹⁹ᵐTc-MAG3 clearance using Russell’s method and Bubeck’s method. This form relies on a database to store, manage and retrieve the data of ⁹⁹ᵐTc-MAG3 clearance studies. Moreover, the form offers the possibility of print a detailed report of each study. This form is included in a software called Nucleolab, which is freely available at http://www.radiofarmacia.org/nucleolab-english
Conclusion: The software we have developed has an easy-to-use interface, that makes the calculation complexity of ⁹⁹ᵐTc-MAG3 clearance studies completely hidden for the user, saving you the time that you previously spent on these laborious calculations and reducing the risk of error.

Topic (Complete): 308 Miscellaneous
Additional (Complete):
  I agree: Yes
  I agree: Yes

EANM Eckert & Zieglar Abstract Award (Complete):
  EANM Eckert & Zieglar Abstract Award : True
  Date of birth (ddmmyyyy) : 06041967