

Biotechnology and Healthcare

Title

Methods for Predicting at Least One of the Total Serum Bilirubin Level and the Hemoglobin Level by Using the Artificial Intelligence and the Non-Invasive Measurement

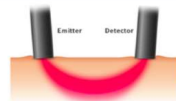
<p>Abstract</p>	<p>Current jaundice measurement devices can help to detect neonatal jaundice, but the accuracy in newborns of color or premature babies is insufficient. However, the prevalence of jaundice in colored people and premature babies is much higher than that of Aryan babies. The bilirubin detection system developed by our laboratory can be used for neonatal jaundice detection. The correlation coefficient of our measurement and the serum bilirubin level is higher than the commercially transcutaneous bilirubinometer. In addition, we can import parameters such as bilirubin, oxygenated hemoglobin, non-oxygenated hemoglobin, melanin, heart rate, body temperature, and basic information including the mother's gestational age, baby's birthday, weight, length, and blood type into the computing processor. The machine learning methods significantly increase the accuracy of the bilirubin values of the subjects for precision screening of neonatal jaundice.</p>
<p>Benefits</p>	<ol style="list-style-type: none"> 1. Effectively improve the correlation coefficient between the transcutaneous bilirubin value and the serum bilirubin value. 2. To improve the precision of screening neonatal jaundice.
<p>Industry Categories</p>	<ul style="list-style-type: none"> • Newborn jaundice detection • In-Vitro Diagnostic Devices • Diagnosis and Monitoring Devices • Medical Information Technology
<p>Keywords</p>	<p>The optical system, bilirubin concentration, bilirubin meter, machine learning</p>
<p>Patent No.</p>	<p>TW 110136164、US17/488,743</p>

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