

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



МАТЕРІАЛИ

**104-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
06, 08, 13 лютого 2023 року**

Конференція внесена до Реєстру заходів безперервного професійного розвитку,
які проводитимуться у 2023 році №5500074

Чернівці – 2023

охорони здоров'я. Грант на будівництво в розмірі 487,5 млн. шекелів (138 млн. дол. США) буде виплачено концесіонеру чотирма частинами по мірі реалізації основних етапів.

Висновки. Залучення приватного бізнесу є важливою складовою функціонування сучасної системи охорони здоров'я в розвинених країнах світу, яку слід запровадити в Україні.

СЕКЦІЯ 22 ФІЗИЧНІ ДОСЛІДЖЕННЯ В МЕДИЦИНІ

Ivanchuk M.A.

SIMPSON'S PARADOX IN BIOSTATISTICS

*Department of Biological Physics and Medical Informatics
Bukovinian State Medical University*

Introduction. The art of data science is to see beyond the data i.e to use and develop methods and tools to gain insight into what this hidden reality looks like. Simpson's Paradox demonstrates the importance of scepticism and interpretation of data about the real world and the danger of oversimplifying a more complex truth by trying to see the whole story from a single data point of view.

The aim of the study is considering cases of Simpson's paradox in medical researches.

Material and methods. Analysis of the presented researches.

Results. Simpson's paradox is a paradox in statistics when, in the presence of two groups of data, the equally directed dependencies observed in each and when these groups are combined, this dependence either disappears or changes its direction to the opposite. This phenomenon has long been recognized as theoretically possible, especially in the field of medical statistics but there are few real examples in the literature. Due to the intuition, one can discover hidden variables through exploratory data analysis. The researcher must then decide whether to split the data into separate distributions or pool the data. The right decision is entirely situational, which is one of the reasons why biostatistics exists at the intersection of statistics and medicine: the scientist needs to know the data and, most importantly, what result they want to get from the data in order to choose the right approach.

Simpson's paradox can complicate the process of decision-making. One can scrutinize, regroup and resample the data as much as possible, yet if several different conclusions can be drawn from all the different categories, then choosing which grouping to draw conclusions from to gain insights and develop strategies is an important and challenging problem. A scientist needs to know what exactly they are looking for and choose the best point of view that will give a fair reflection of the truth.

Conclusions. During the statistical analysis of medical data, it is necessary to take into account the possibility of Simpson's paradox, which can significantly change the conclusions of the study.

Kulchynskiy V.V.

ELECTRICAL IMPEDANCE SPECTROSCOPY AS A METHOD OF POLYMER COMPOSITES ANALYSIS

*Department of Biological Physics and Medical Informatics
Bukovinian State Medical University*

Introduction. Considerable interest has been attracted to polymer composites in recent decades. Size-dependent properties of nanoparticles cause great potential for many applications of polymer composites. The reason is that polymer matrices can be easily processed and one can control the growth and morphology of nanoparticles. Shape and size of inorganic nanoparticles due to high surface-to-volume ratio are predetermining factors for polymer composites properties.

The aim of the study. To explain usage of electrical impedance spectroscopy as a method of polymer composites analysis among other methods within complex investigation.