



SURVEY ABOUT KNOWLEDGE OF NANOMEDICINES AMONG PHARMACISTS IN UKRAINE



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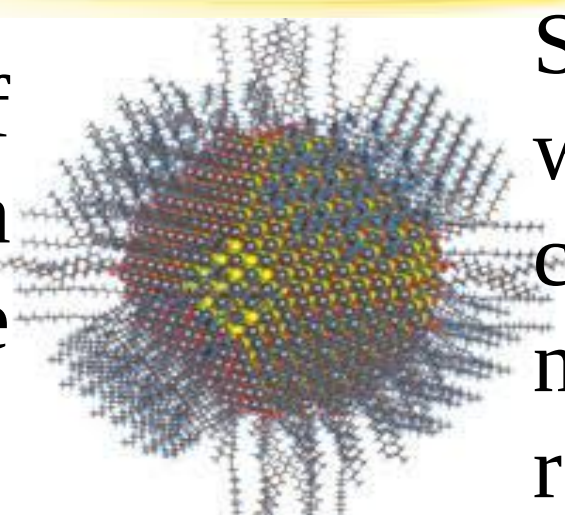
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INTRODUCTION

Nanomedicines are relatively new and rapidly evolving field of pharmaceutical science. Studies with nanoparticles of metals are conducting at the Department of Drug Technology and Biopharmaceutics of Danylo Halytsky Lviv National Medical University, Ukraine. Currently 12 new pharmaceutical preparations with silver and gold nanoparticles have been developed. Nanomedicines offer multiple benefits, therefore, trends and perspectives in this area are of high interest among the pharmacists and physicians.

AIM OF THE WORK

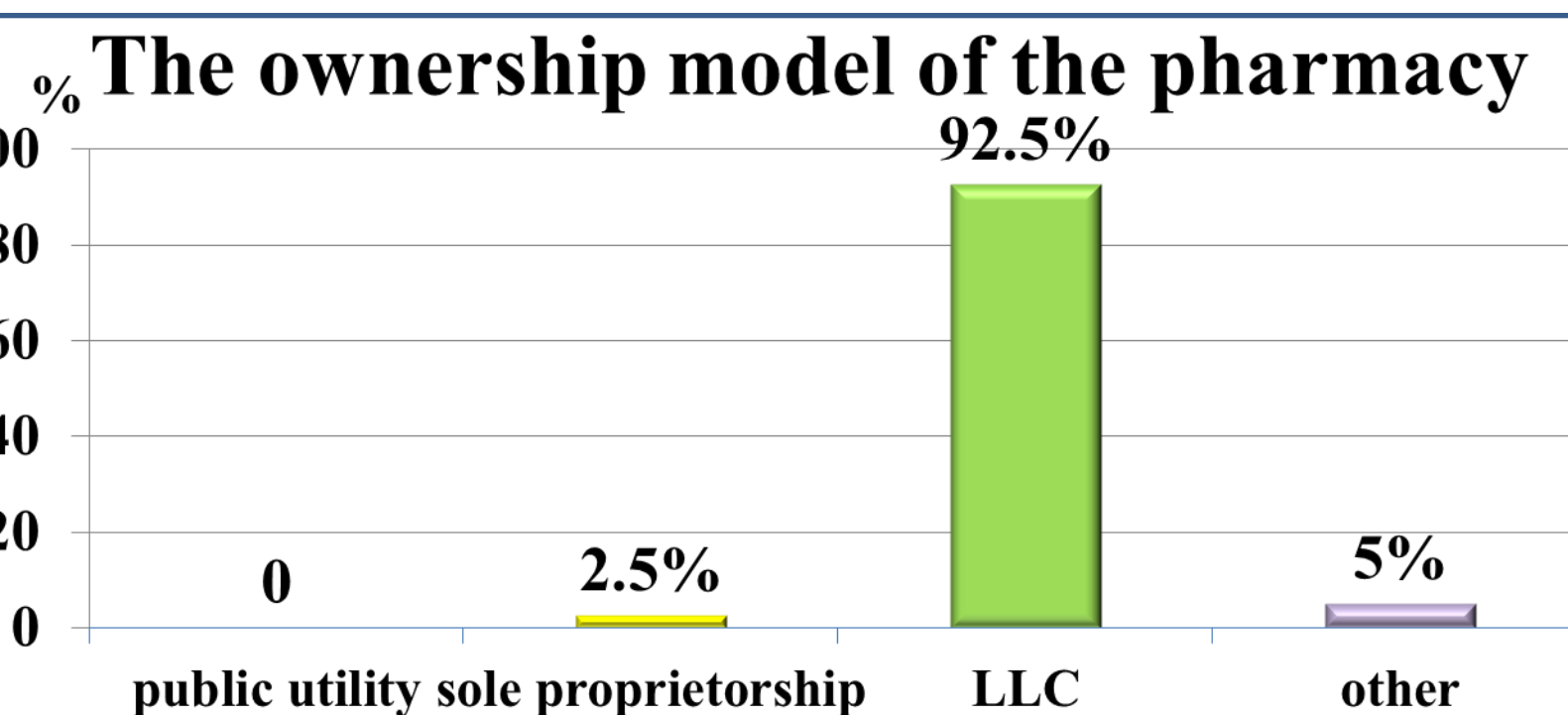
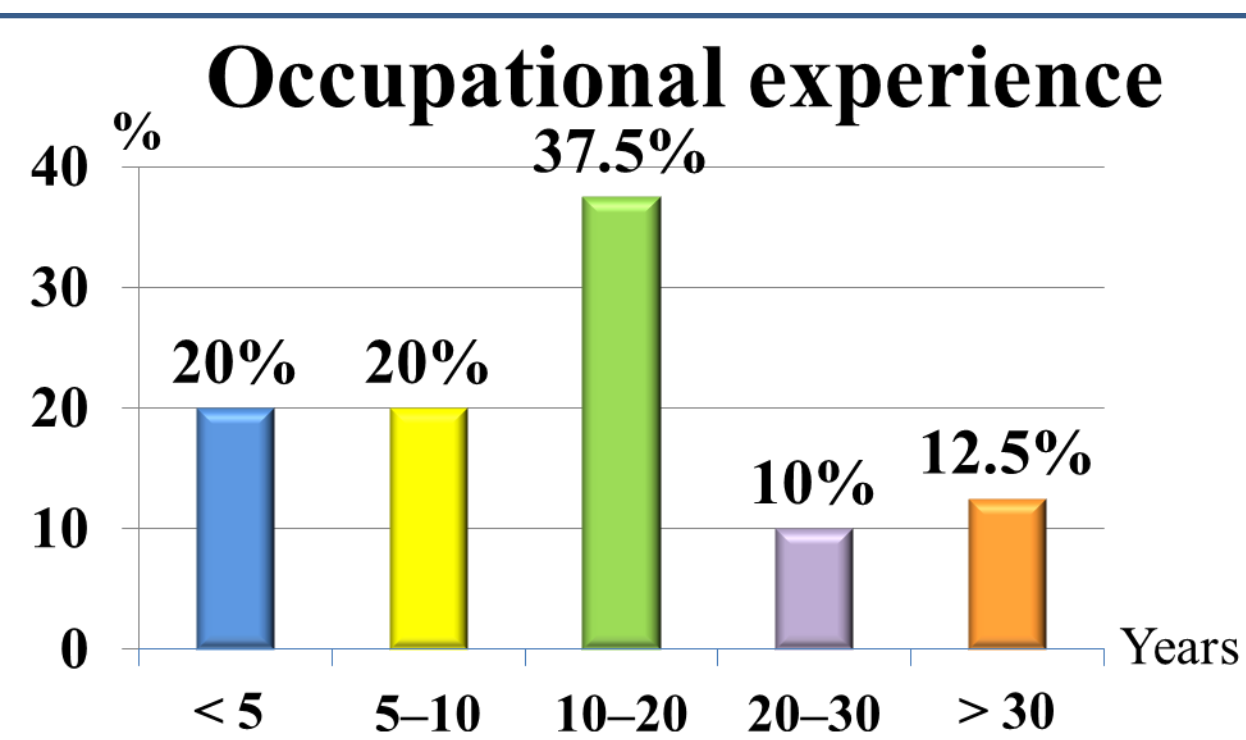
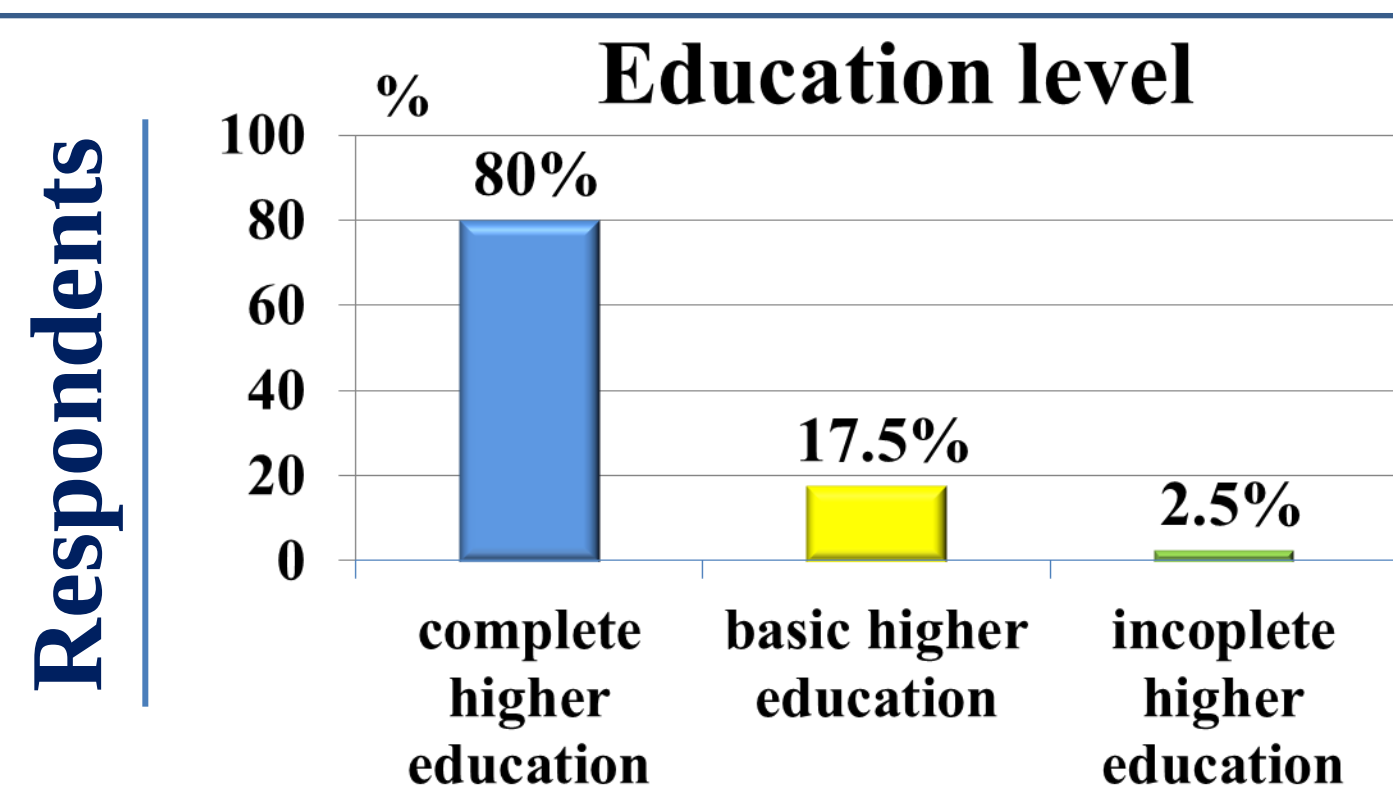
to assess knowledge of nanomedicines among pharmacists in Ukraine and to outline the perspective directions of further research.



Survey was conducted in April, 2019 in the form of questionnaire that was sent to pharmacists in West region, Ukraine. Questionnaire consists of introduction part (n=6) and specific questions on nanomedicines (n=14). Due to the preliminary character of the research, a total of 40 pharmacists took part in this study.

METHODS

RESULTS



Nanodrugs are drug delivery systems developed to operate at the nanometer size range with novel engineered properties (*Devalapally and Chakilam 2007*).

The aims for nanoparticle entrapment of drugs (*De Jong and Borm 2008*):

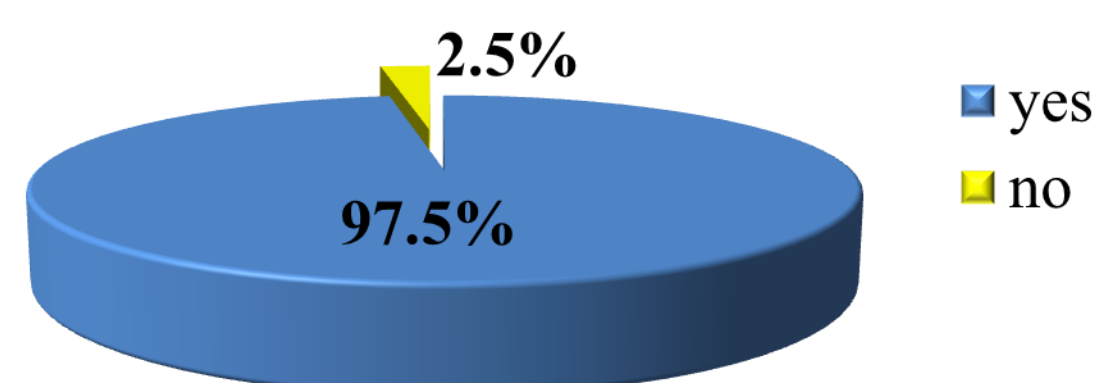
- enhanced delivery to, or uptake by, target cells;
- reduction in the toxicity of the free drug to non-target organs

Questions included into the questionnaire

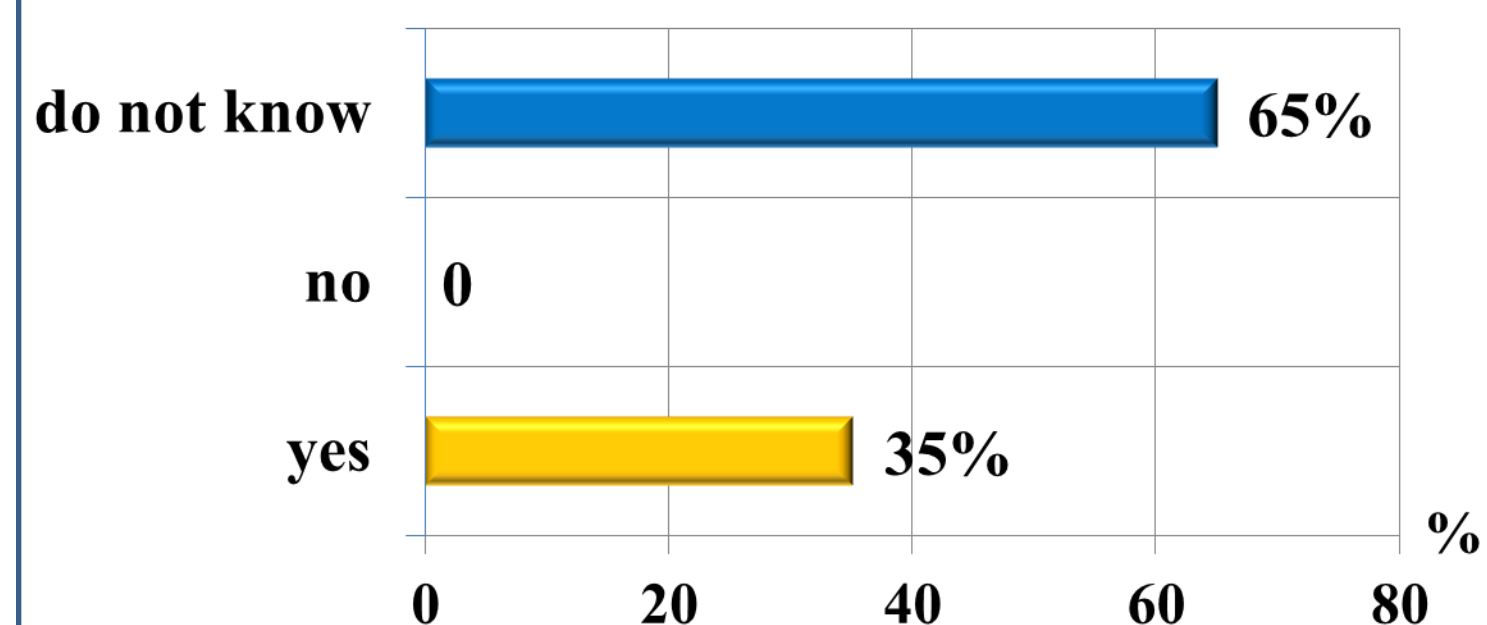
How do you evaluate your knowledge of nanomedicines?



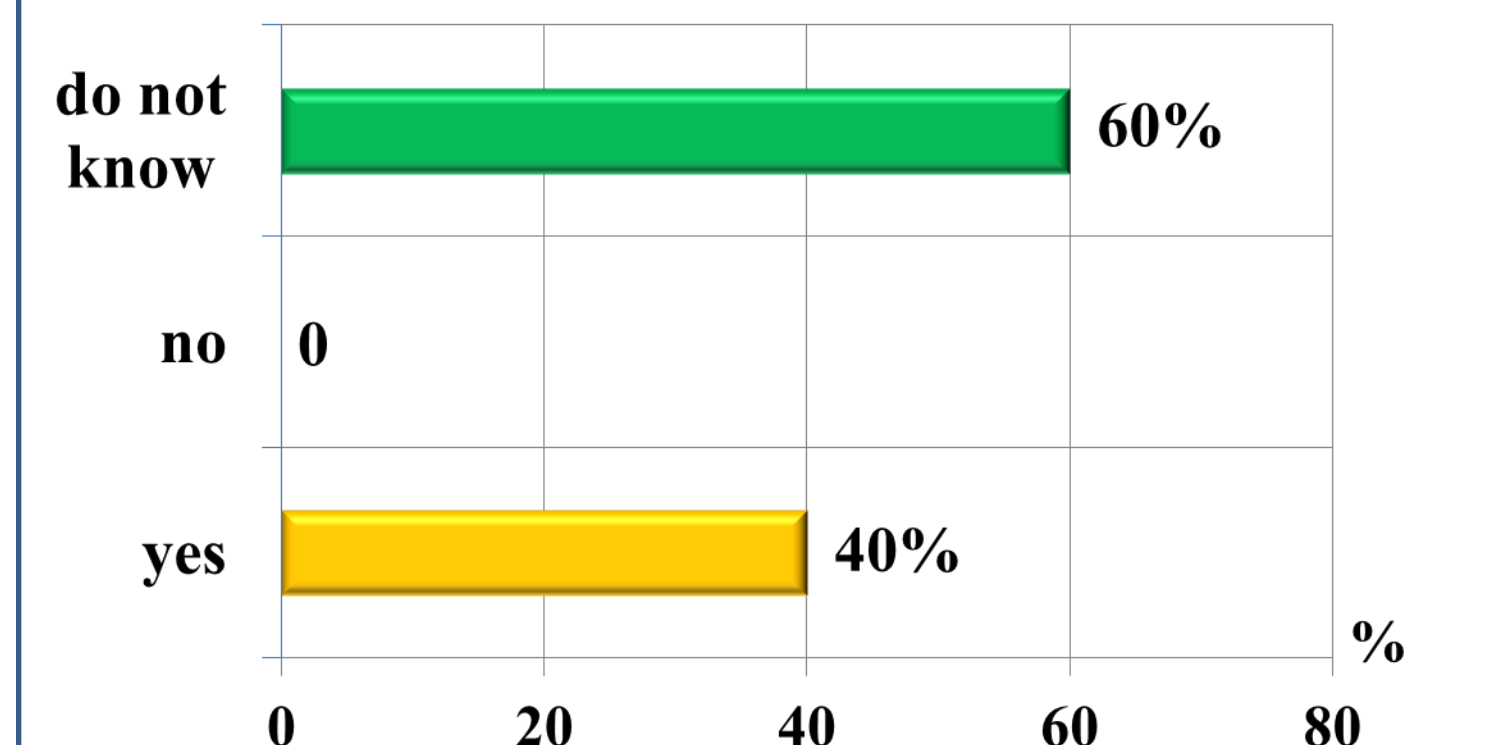
Do you want to get more information about nanomedicines?



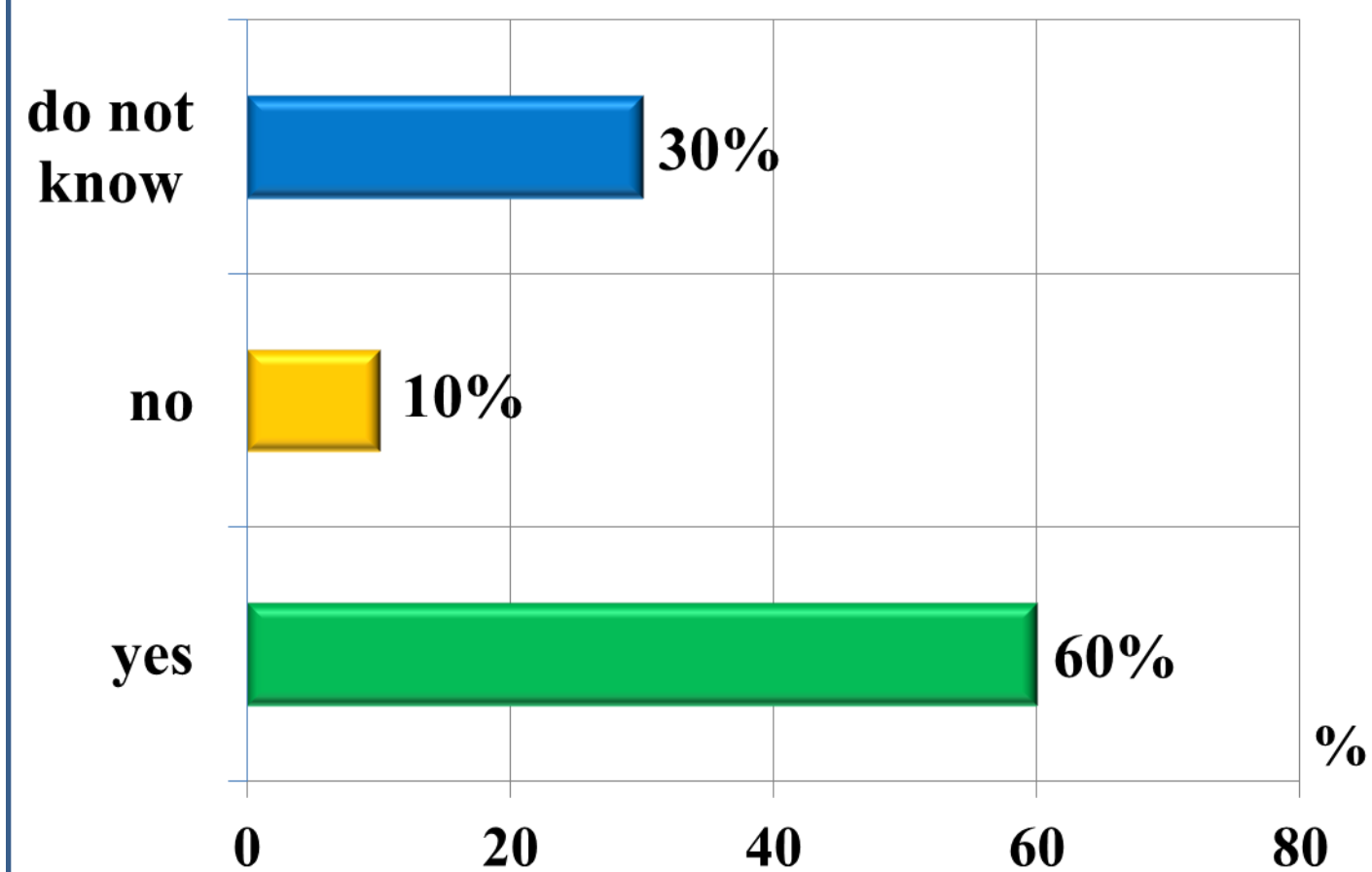
Do you estimate nanomedicines to be safe for health?



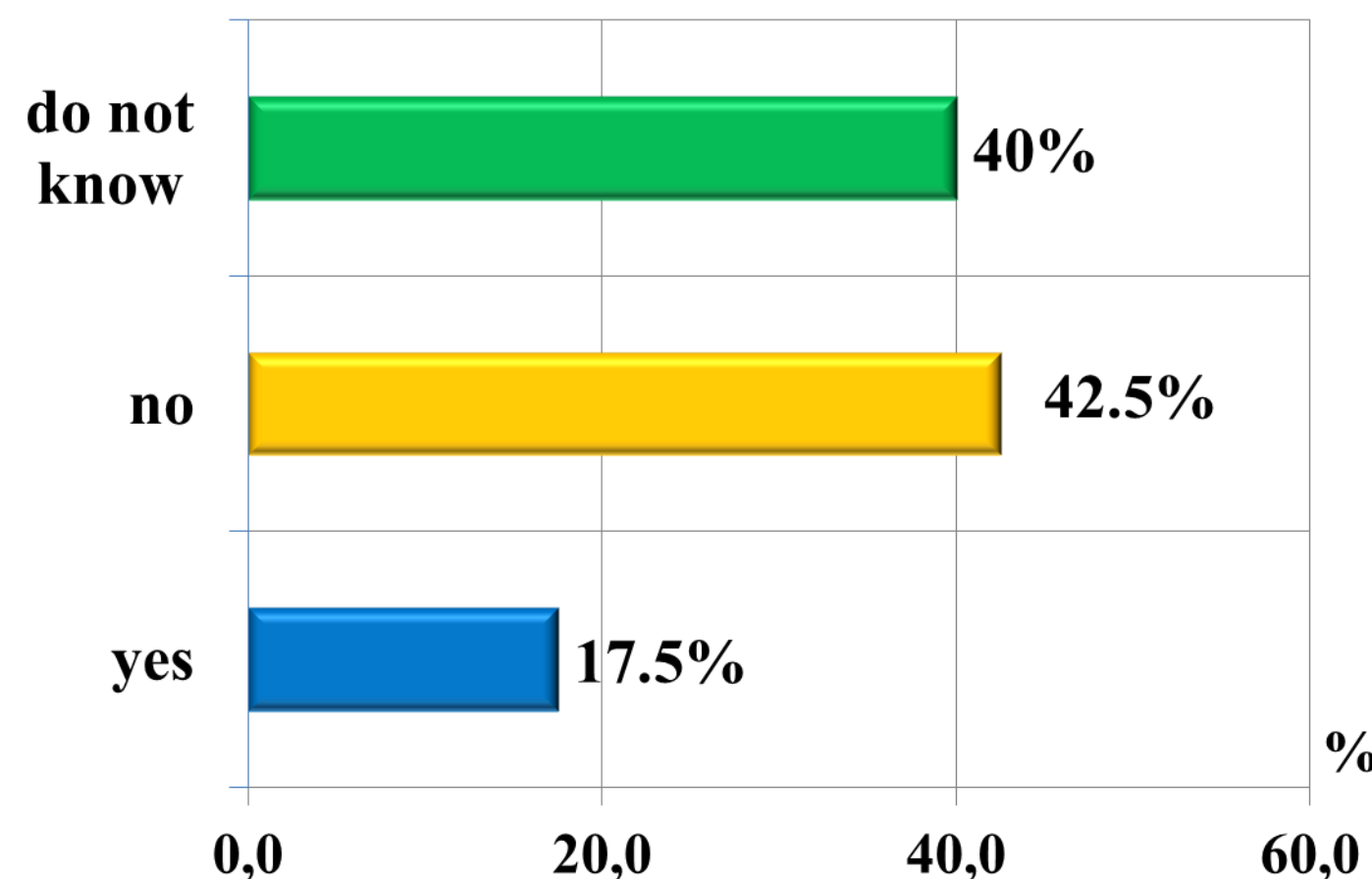
Do you estimate nanomedicines to be effective?



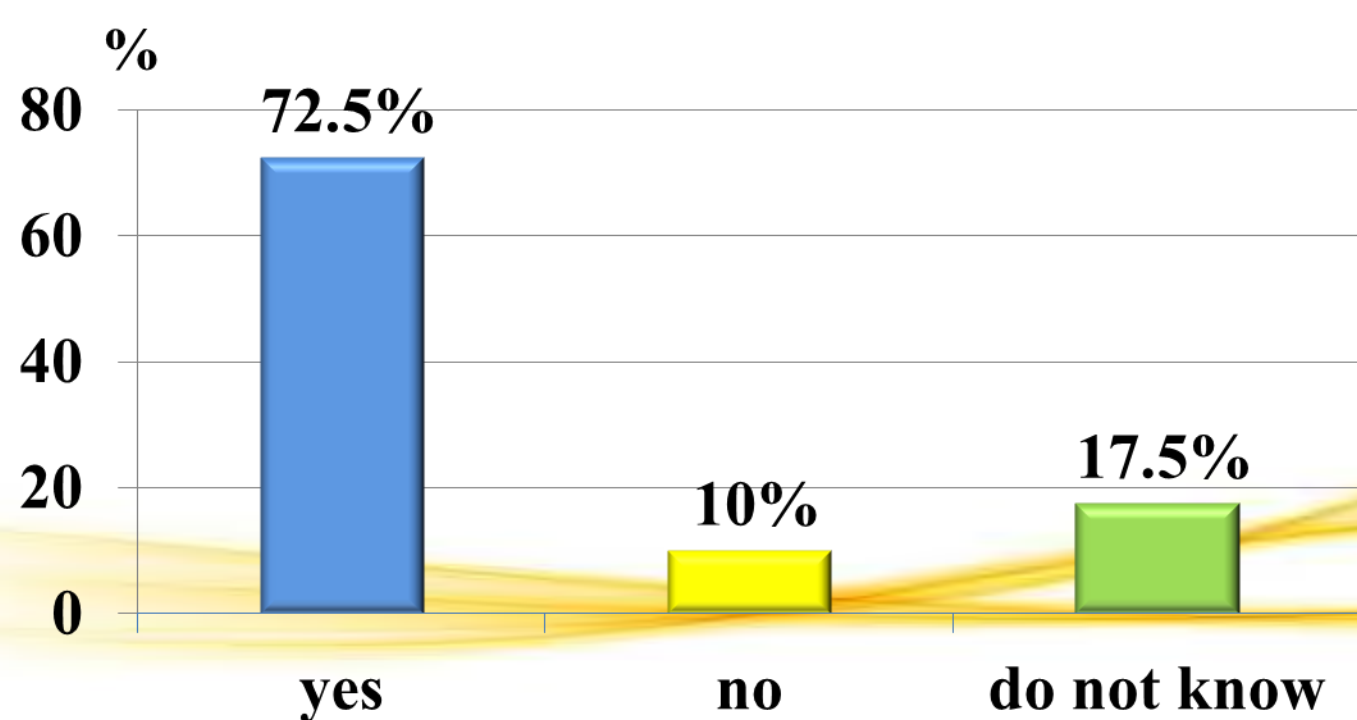
Do you think that nanomedicines have another mechanism of action than traditional ones?



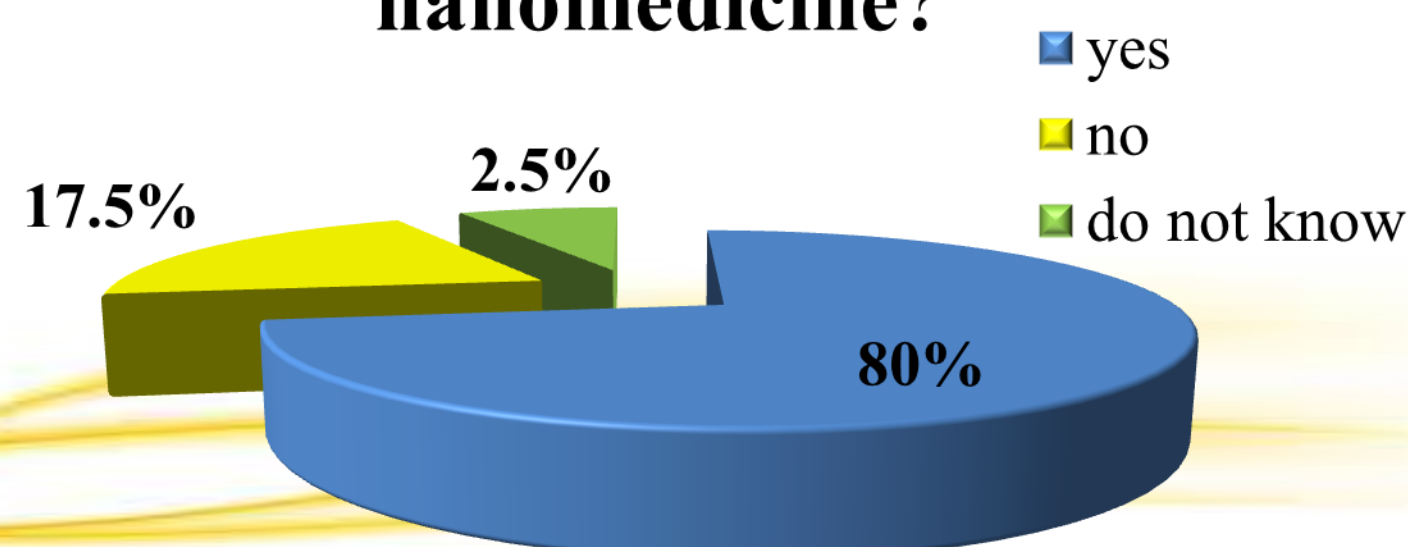
Do you estimate nanomedicines to be just “scientific fashion”?



Is it needed to implement normative documents for regulating nanomedicines in Ukraine?



Is it necessary to add the information on API in nanosizes into the instructions for medical use of nanomedicine?



CONCLUSIONS

Knowledge level of nanomedicines among the Ukrainian pharmacists even with long professional experience is quite limited and pharmacists themselves do understand this. This may be caused by the lack of normative regulation of nanomedicines in Ukraine. Therefore, educational programs for pharmacists are needed to raise awareness about the mechanisms of action, effectiveness and safety of nanopreparations. Normative regulation of nanomedicines in Ukraine also should be developed.