Although artificial intelligence (AI) driven diagnostic software reached expert level accuracies in many studies of image-based medical specialties, it is still unclear if these achievements translate to an improved clinical practice. Recent advances in image based skin cancer diagnosis shed more light on the underexplored field of human-computer collaboration in diagnostic medicine.

The accuracy of human raters does not improve with all types of AI-based decision support. In order to be useful to human raters, decision support should be simple, concrete, and in accordance with the given task. In contrast to the current narrative the primary focus should shift from human-computer-competition to human-computer- and crowd-computer-collaboration.