BACKGROUND AND AIMS: We aimed to investigate a new team-based remote teaching model (TRTM) among M.D and Ph.D. candidates major in nephrology to improve their scientific research training and reduce stresses during the COVID-19 pandemic.

METHOD: From February 1 to April 30 in 2020, we set up TRTM (Fig 1) via online conferencing systems as: (i) Plan-Do-Check-Action cycle every two to three days to promote project progress, (ii) weekly lab meetings for sharing experiences and ideas; and (iii) weekly journal clubs for literature reading and knowledge expansion. We recruited nine students in TRTM training, and another 25 students as control group, who arranged their schedule by themselves during the quarantine.

RESULTS: 1. A survey about the remote teaching: 25 mentors and 34 students had received a survey and all believed that teamwork, lab meeting, and short-term academic goals were essential in remote training. Non-scheduled discussion (72.0%, 18/25) and regular online lab meetings (60.0%, 15/25) were the most common traditional methods. About 85.3% of students and 28.0% of the mentors agreed that "poor self-control" was the main cause of remote-teaching difficulty. 2. The effectiveness of TRTM training: Compared to the control group, students in TRTM had more self-reported benefits from "mentors' feedback", "team support", and "team communication" (All $P<0.05$), despite no significant differences in learning productivity or daily work progress. Meanwhile, the TRTM group presented with lower "anxiety related to the COVID-19 pandemic" and lower "stress-related to scientific research" (Both $P<0.05$). For TRTM students, the academic ability was also evaluated at the baseline and after three months of practice, by team members (7 teachers and 9 students). They made progress in varied aspects during the pandemic, such as executing planned tasks, self-improvement based on feedback, and teamwork ability (All $P<0.001$).

CONCLUSION: Our team-based remote teaching model helped students gain more supports and growth in academics and reduce psychological pressures caused by isolation.