

SID

---

## View Abstract

Below is a proof of your abstract. Please review for accuracy as this is how your abstract will be printed.

---

**CONTROL ID:** 3176198

**TITLE:** Application of artificial intelligence diagnosis in seborrheic keratosis and basal cell carcinoma in Chinese race

**AUTHORS (FIRST NAME, LAST NAME):** Xiang Chen<sup>2</sup>, Shuang Zhao<sup>1</sup>, Kai Huang<sup>1</sup>, Xiaoyu He<sup>3</sup>, Bin Xie<sup>3</sup>

**INSTITUTIONS (ALL):** 1. Xiangya Hospital, Central South University, Changsha, Hunan, China.

2. Xiangya Hospital, Central South University, Changsha, Hunan, China.

3. School of Information Science and Engineering, Central South University, Changsha, Hunan, China.

**ABSTRACT BODY:**

**Abstract Body:** Seborrheic keratosis and basal cell carcinoma are two common skin tumors, benign and malignant respectively, which are easily misdiagnosed. Invasive skin biopsy and pathological examination are needed for further clarification. We constructed the Chinese race skin tumor database and an artificial intelligence system using fine-tuned InceptionResNetV2 (a convolutional neural network structure) for assistant diagnosis of basal cell carcinoma and seborrheic keratosis was established. This is dedicated to the development and promotion of intelligent diagnosis and treatment system for Chinese skin tumors. Firstly, the skin tumor database of Chinese race was constructed, Xiangya-SkinT, including more than 100 diseases with a total of 400,000 pieces of data, and each clinical picture had corresponding pathological data and complete medical history data. It is currently known to be the largest and most complete database of skin tumors in the world. And then we picked the largest two types of skin tumors (BCC and SK) from the database to carry out the exploratory research. We also tested open source databases in other races (Derm101 database and Dermnet database) with the trained model. Meanwhile, we conduct cross-testing and Man-machine competition. Finally, we analyze the model to distinguish the information between the wrong pictures. We found that CNN has the ability to distinguish BCC from SK and exceeds the doctor's level, and the mean accuracy of BCC and SK is 97.75% and 97.77%. With such a high degree of accuracy, we can try to use this system to guide the follow-up treatment of these two diseases. If diagnosed as SK, it can continue to be observed; if it is diagnosed as BCC, it is likely to be resected immediately and biopsied immediately. This study laid the foundation for our follow-up skin disease multi-pathology and multi-dimensional research.

**KEYWORDS:** Basal Cell Carcinoma, Imaging, Clinical Research.

**CURRENT PREFERRED CATEGORY:** Interventional Studies, Clinical and Patient Reported Outcomes | Skin, Appendages, and Stem Cell Biology

**Academic-Industry Partnership Opportunity Y/N:** Yes

**Kligman app:** (none)

**Disclosure Agreement:** Agree to all disclosure conditions.

**Source of Support-Abstract:** Institution

**Associate Meeting Consideration:** Yes

---

© Clarivate Analytics | © ScholarOne, Inc., 2019. All Rights Reserved.

ScholarOne Abstracts and ScholarOne are registered trademarks of ScholarOne, Inc.

ScholarOne Abstracts Patents #7,257,767 and #7,263,655.

[@ScholarOneNews](#) | [System Requirements](#) | [Privacy Statement](#) | [Terms of Use](#)

Product version number 4.16.0 (Build 79). Build date Thu Mar 7 15:57:22 EST 2019. Server ip-10-236-26-45