
AUDT:超声科应对COVID-19疫情的防控建议

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AUDT:超声科应对COVID-19疫情的防控建议。编者按：新型冠状病毒主要以飞沫和接触传播为主，其传播速度快，感染率高。本文从超声科日常防控工作出发，结合COVID-19疫情相关的国家政策方案及最新研究进展对超声医师防护提出相关防控建议。

第一作者简介



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黄钰清，在读硕士研究生，目前就读于解放军医学院，攻读方向为急诊超声、介入超声。中国医学装备协会超声装备技术分会战创伤与急症超声专业委员会委员。

摘要

尽管目前中国的疫情得到有效控制，但COVID-19在亚洲其他国家、欧洲和北美的防控形势却异常严峻。COVID-19具有人群普遍易感、传播快、进展快、危重症发生率高的特点。新型冠状病毒主要以飞沫和接触传播为主。因为部分地区防护措施及防护用品不足，医护人员感染率高，因此做好院内的疫情防护工作至关重要。目前因其便携性、准确性等优点，超声已在COVID-19的诊断、疗效评估、随访，尤其在重症新冠中发挥了不可或缺的重要作用。在超声诊疗过程中，医师与患者近距离密切接触，感染风险较高。同时超声科诊区，在平常工作中存在患者聚集、诊室密闭通风差等不利因素。本文从超声科日常防控工作出发，结合COVID-19疫情相关国家政策方案及最新研究进展对超声医师防护提出以下应对COVID-19疫情的防控建议。

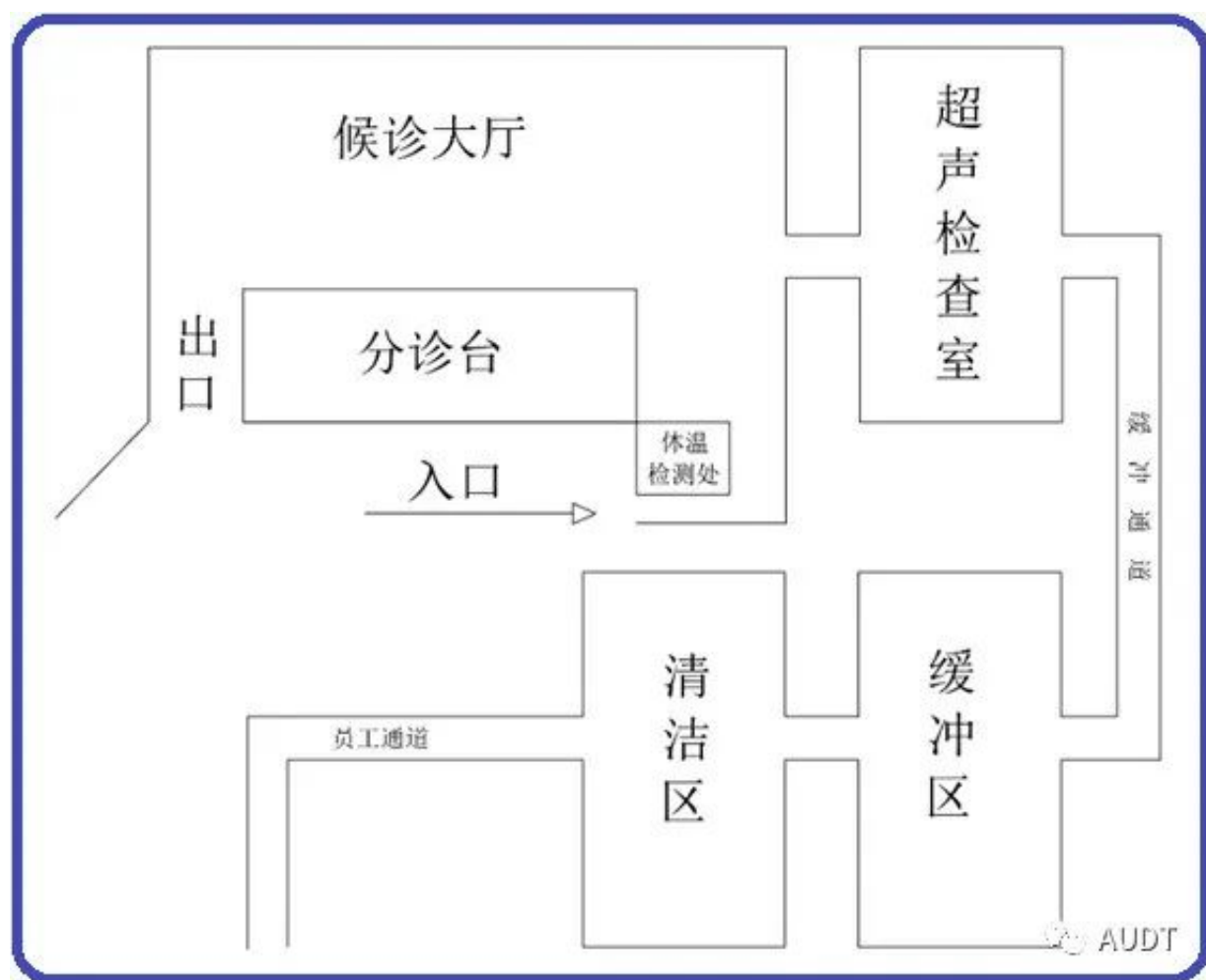


图1超声检查区域示意图

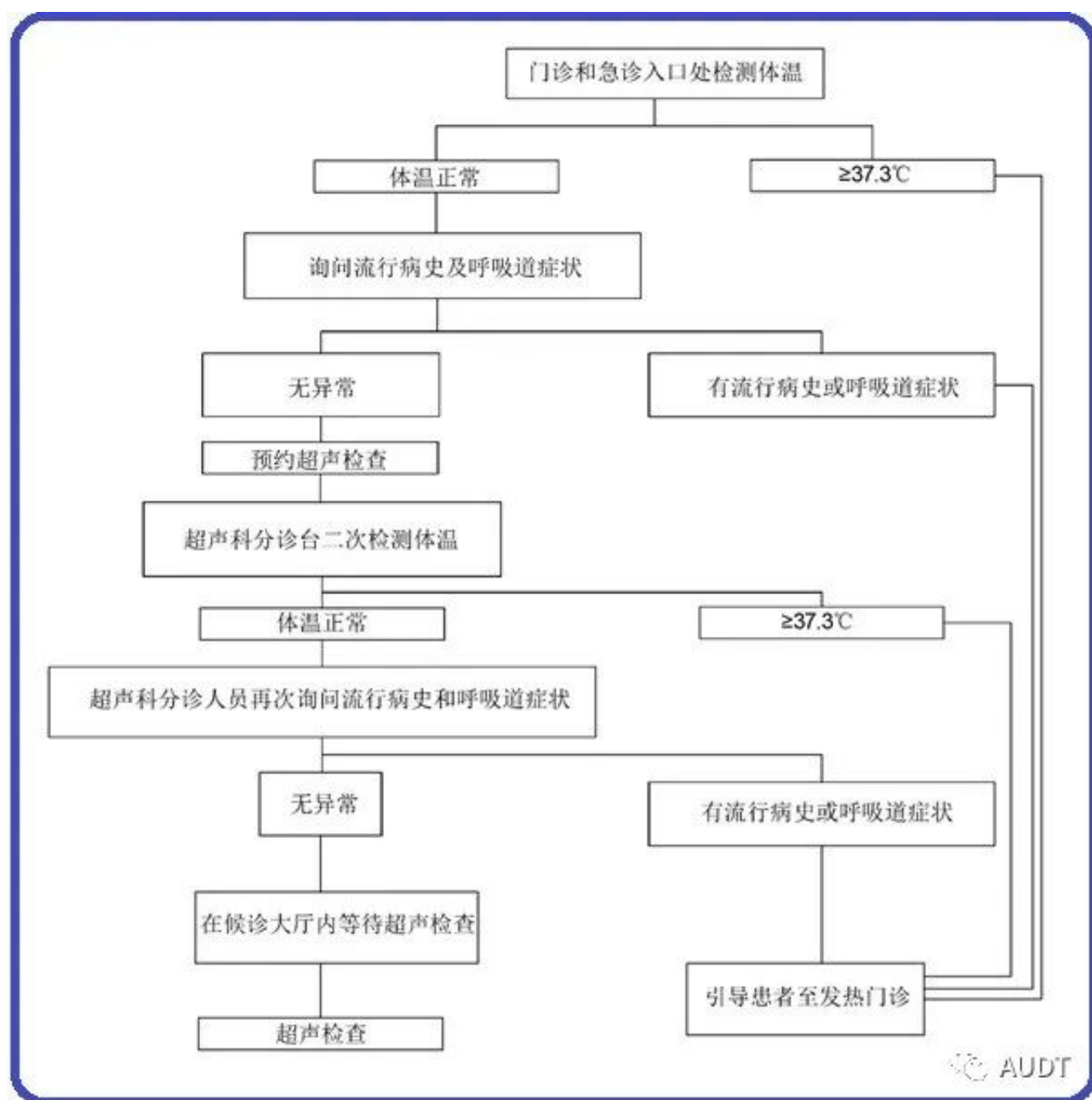


图2就诊流程示意图

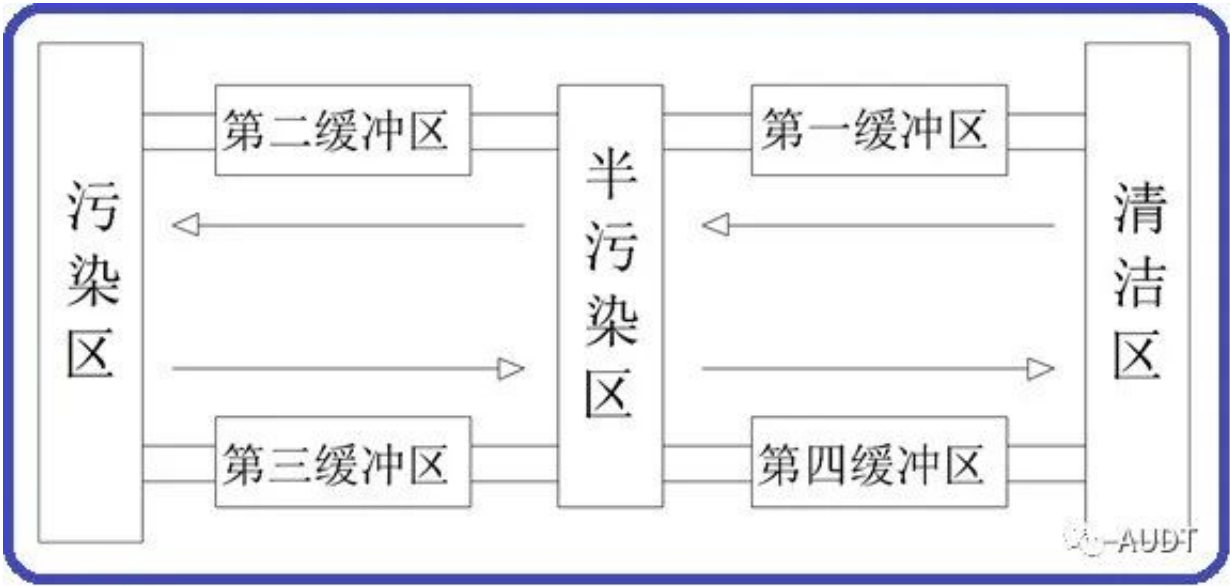


图3 隔离区分区示意图

穿防护服的步骤		脱防护服的步骤	
第一缓冲区	戴帽子	第三缓冲区	手消，脱外层手套
	戴口罩 (N95/N99)		手消，脱护目镜或防护面屏
	换工作服		手消，脱鞋套
	戴内层手套		手消，脱防护服
	换工作鞋		手消
第二缓冲区	穿防护服	第四缓冲区	手消，换鞋
	戴护目镜或防护面屏		手消，脱内层手套
	戴外层手套		手消，脱工作服
	穿鞋套		手消，脱口罩
			脱帽子，手消

图4穿脱防护的流程图

本文精要导读：

Suggestions on Prevention and Control of COVID-19 in Ultrasound Department

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Abstract: Although the outbreak in China has been effectively controlled, the international situation of prevention and control of coronavirus disease 2019 (COVID-19) still poses a serious public health risk. COVID-19 has been declared a pandemic by World Health Organization (WHO) due to its highly contagious nature, rapid transmission, swift clinical course, profound worldwide impact, and high mortality among critically ill patients. COVID-19 is mainly transmitted by respiratory droplets and contact routes, which could be effectively prevented by proper medical equipment and hand hygiene. However, due to the lack of effective protective measures and personal protective equipment of healthcare personnel in some area, the infectious rate of COVID-19 remains high, especially in clinical settings. At present, due to its portability and accuracy, ultrasound has been playing an indispensable role in the diagnosis, evaluation, and follow-up of COVID-19 patients, especially those in severe conditions. In the course of diagnosis and treatment, because sonographers often work closely with patients, coupled with the increasing number of patients and relatively poor ventilation in the working area, the risk of occupational exposure is undoubtedly high. This article combined the standard precaution methods with current Chinese government's COVID-19 strategy and policies, aiming to provide suggestions on the prevention and control of COVID-19 pandemic for ultrasound professionals.

Key Words: COVID-19; Ultrasound department; Prevention and control

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Since the outbreak of novel coronavirus infection in late December 2019, the number of cases has been rising rapidly and prevailing worldwide. On January 12, 2020, the pathogenic virus was named as 2019-nCoV by the World Health Organization (WHO) [1]. And on January 30th, WHO has declared Public Health Emergency of International Concern for the outbreak of novel coronavirus. As of March 25th, 2020, the cumulative number of cases is 81,846, with 3,287 cases of death (4.02%) and 74,196 cases of cure (90.7%) in China. Outside China, the cumulative number of cases is 372,856 and the number of deaths is 16,235 (4.35%) [2].

The main routes of transmission of novel coronavirus 2019 (COVID-19) are respiratory droplet transmission, contact transmission, and aerosol transmission. The disease is characterized by quick onset, high infectivity, swift clinical course, and high mortality among critical ill patients [3,4]. Evidence showed that 2019-nCoV is sensitive to ultraviolet light and heat at 56°C for 30 min. Other lipid solvents that can effectively inactivate 2019-nCoV include ethyl ether, 75% ethanol, chlorinated disinfectant, peracetic acid, and chloroform [5].

Although chest CT is currently the main imaging modality of evaluating COVID-19, ultrasound, due to

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