

Cryotherapy for Cervical Cancer Prevention

Health need

Cervical cancer affects an estimated 490,000 women worldwide each year and leads to more than 270,000 deaths. About 85 percent of women who die from cervical cancer reside in developing countries. Cervical cancer can be prevented if precancerous lesions are identified early and treated promptly.

Technology solution

Cryotherapy, a freezing treatment, is recognized as the most cost-effective and feasible approach to treating precancerous cervical lesions in these settings. It can also be used in a single visit screen-and-treat approach in primary care settings, an approach which has been demonstrated to increase rates of follow-up. Widespread availability of cryotherapy in developing-country settings is an essential component of an effective screening and treatment approach to cervical cancer prevention in these settings where it is needed most.

Cryotherapy uses a refrigerant gas to destroy abnormal cells. An important aspect of making cryotherapy readily available in developing-country settings is the ability to use carbon dioxide (CO₂), the least expensive and most accessible type of gas, as the refrigerant.

Current status and results

Recent bench testing of a range of cryotherapy devices has demonstrated that clogging or blockage of the device, previously thought to be associated with use of CO₂, may only affect certain devices, suggesting that with an appropriate device, CO₂ could be used effectively.

One of the devices reaching unexpectedly warm temperatures in our bench testing was the LL100, (manufactured by Wallach Surgical Devices), the most commonly used equipment in low-resource settings. PATH shared these findings with representatives from Wallach Surgical Devices, and on September 19, 2009, Wallach took action. They issued a recall for the LL100 sold for use with CO₂. The recall covers equipment that goes back 15 years and affects about 2,500 devices in use worldwide.

The integration of temperature-monitoring equipment into an upcoming clinical evaluation of cryotherapy will allow for assessment of the correlation between tip temperatures achieved and depth of necrosis—information critically needed in understanding whether CO₂ can be successfully used as the refrigerant gas for cryotherapy.



PATH/Jered Singleton

Cryotherapy device.

Availability

For more information regarding this project, contact Jenny Winkler at jwinkler@path.org.

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