

# Sterility Barrier for Ultrasound-guided Procedures

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## Technology description

### Background:

Frequently, ultrasound procedure kits are used for sterility purposes to prevent infection when skin puncture is necessary for ultrasound guided procedures. These kits can include a sterile ultrasound probe cover, sterile gel, and drape, but are expensive and time consuming to use. Ultrasound trained practitioners who routinely perform procedures such as removing fluid from the lungs or an arthritis joint or placing medicine into a joint need to have some way to prevent contamination of the sterile area of the skin puncture site to prevent infection. Instead of using a standard procedure kit, a sterility barrier could be used to prevent infection.

### Invention Description:

The subject invention is a sterility barrier, which can replace a standard procedure kit. The sterility barrier is used to prevent the non-sterile ultrasound probe and gel (which are part of the standard procedure kit) from moving onto the sterile surface near an injection site. It is less expensive and easier to use than the standard procedure kit.

The sterility barrier creates a wall of protection from contamination of the area on the skin to be punctured by a needle or catheter in ultrasound guided procedures. The barrier separates the area where the non-sterile ultrasound probe is used in identifying the target site below the skin and the area that is sterilized before puncture thus decreasing the risk of infection to the patient.

## Application area

The sterility barrier would be an effective, efficient, and cost effective alternative to the present method of performing ultrasound guided procedures. Ultrasound guided procedures are rapidly increasing in numbers across many areas of medicine.

## Advantages

Provides a sterile barrier between the puncture site and the ultrasound probe site, therefore reducing the risk of infection

Reduces patient preparatory time with a simply adhesive device rather than a full kit and draping

Reduces cost in comparison to kits

Comes in various sizes for different sites

Adheres and conforms easily to multiple sites

Can be used by a single individual and does not require an assistant to use

The procedure can be completed more quickly and does not require an assistant that is needed with the standard procedural kit.

The barrier reduces the time spent and cost of ultrasound guided procedures such as a joint injection by providing a sterile barrier that is simple to apply in any location on the body and is effective in providing a sterile barrier.

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