AUCTORES
Globalize your Research

Journal of Dermatology and Dermatitis
Abdulwahab Alahmari*

Open Access

Editorial Note

# Skin line and subcutaneous fat in radiology: Editorial

**Abdulwahab Alahmari**

Radiology Department, Al-Namas General Hospital. Ministry of Health. Al-Namas City, Saudi Arabia.

**Corresponding Author:** Abdulwahab Alahmari, Radiology Department, Al-Namas General Hospital. Ministry of Health. Al-Namas City, Saudi Arabia.

**Received date:** August 20, 2022; **Accepted date:** September 15, 2022; **Published date:** January 02, 2023

**Citation:** Abdulwahab Alahmari. (2022) Skin line and subcutaneous fat in radiology: Editorial. *J. Dermatology and Dermatitis.* 8(1); DOI:10.31579/2578-8949/106



## Abstract

The aim of this paper is to shed the light on a neglected topic in radiology which is imaging the skin and subcutaneous fat. This paper will list many issues can be diagnosed when evaluating a skin line & fold and subcutaneous fat on different imaging modalities.

**Keywords:** skin line; skin fold; subcutaneous fat; adipose tissue; X-ray; CT; MRI; US

## Editorial

Both skin and subcutaneous fat can be seen on different imaging modalities. Low energy X-ray will reflect from the skin which will make the skin appears lighter on X-ray. X-rays pass through many items, including skin, and give off a pattern of white light on the film. The denser an object is the more difficult it is for X-rays to pass through it, and so shadows that appear on the film show up as dark areas. On X-ray, the skin line and subcutaneous fat appear very clear for example in the breasts, axilla, etc. On CT scan, the subcutaneous fat and skin line appear in all body parts. The skin line fold can make an artifact known as Mach band effect which is the result of a dark object located next to a lighter object which will form a pseudo-shadow. This shadow can be mistaken as a disease based on the region that skin fold is in. the skin line can show any break as a sign of a foreign body. The subcutaneous fat can help in identifying a subtle fracture. On CT scan, the subcutaneous fat can be measured to give estimation for the patient to know about the layer of fat build up on them or in case if they follow a diet and want to know how much change has done to the subcutaneous fat layer. On MRI fat can be seen without using the fat suppression sequence to show the amount of adipose tissue the patient has. Both T1 and T2 can show the fat because the fat has a high and long signal, while both T1 and T2 have very short relaxation time so the adipose tissue will appear on both sequences. Sometime on MRI, small amount of fat can't be seen. The subcutaneous fat might cause chemical shift or ghosting artifact on MRI. Skin lesions can be detected on plain radiographs as a density on the surface. That's why mammogram and Tomosynthesis a.k.a 3D mammogram is used to evaluate the breasts. The results are reported by means of a radiograph that shows a shadowing that is irregular in shape, with well-defined borders and relative density. "A skin X-ray" can show skin conditions like melanoma, basal cell carcinoma, and erythroderma. The skin/subcutaneous fat on X-ray/CT scan are good way to look at the thickness of the skin and see how it changes over time. You can see from this example that there are areas where the skin is much thicker than other areas and it might show signs of injuries like deep burns. The use of X-ray and other imaging modalities with skin condition is similar to the use of thermal imaging (i.e., thermograph) in detecting cancer which are both still primitive. Even though; thermal imaging use for medical imaging was proposed since the 70s, but not prominent like other imaging modalities. Since subcutaneous fat work as a cushion, a contusion or "fracture" of subcutaneous fat can be spotted on ultrasound. Fat stranding can be a sign of a pathology on CT scan as in hernia and other pathological processes. As well, the skin line and the subcutaneous fat will appear as an out pouching sac. The usefulness of using imaging modalities to image skin and subcutaneous fat is beyond what is mention in this paper!