

# Isolated pink papule on the chest

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## Report of Cases

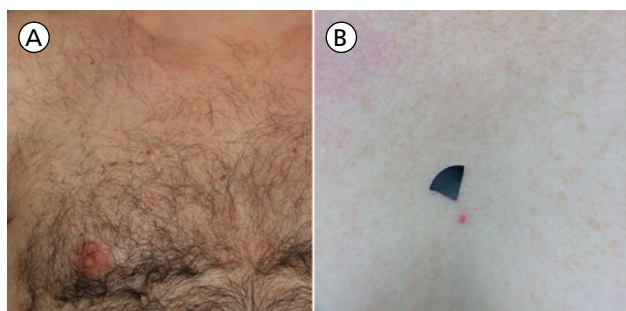
**Case 1:** A man in his fifties with a history of Hodgkin lymphoma treated 20 years prior with the Stanford V protocol and mantle field radiation (total dose: 36 Gray) presented for skin examination. A 3 mm pedunculated pink papule was found on the right chest within the prior radiation field (Figure 1A). The lesion was asymptomatic and of unknown duration. There was no history of change, bleeding, or itching. Polarized dermoscopy of the papule revealed irregular linear and looped branching vessels that terminated in a semicircular or circular fashion, also termed “cherry-blossom” vessels (Figure 2A).

Histopathologic examination revealed a pedunculated well-circumscribed nodular epithelial tumor composed of uniform cuboidal cells with round basophilic monomorphic nuclei. Multiple broad cords of the anatomizing tumor epithelium connected to the overlying epidermis, surrounding characteristic sclerotic well-vascularized stroma (Figure 3A).

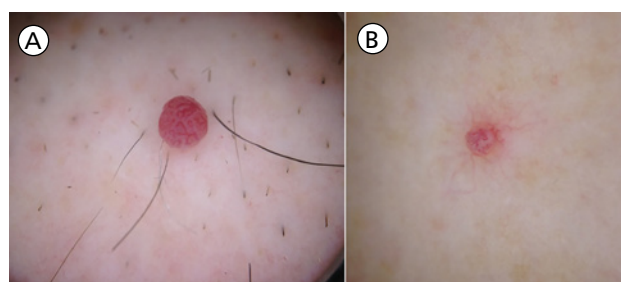
**Case 2:** A woman in her fifties with a history of basal cell carcinoma and B-cell acute lymphoblastic leukemia status post two allogenic hematopoietic stem cell transplants (total body irradiation induction dose of: 13.75 Gy) presented for skin examination. A new, asymptomatic 2 mm pedunculated pink papule was found on the presternal chest (Figure 1B). Polarized dermoscopy of the lesion revealed semicircular/circular branching vessels originating from a common stem vessel (Figure 2B).

Histopathological examination revealed a polypoid epithelial tumor comprised of broad downgrowths of cuboidal epithelium clearly demarcated from overlying epidermis amidst a background of hyalized/sclerotic highly vascular stroma. Small ducts with a pink cuticle were noted within epithelial bands (Figure 3B).

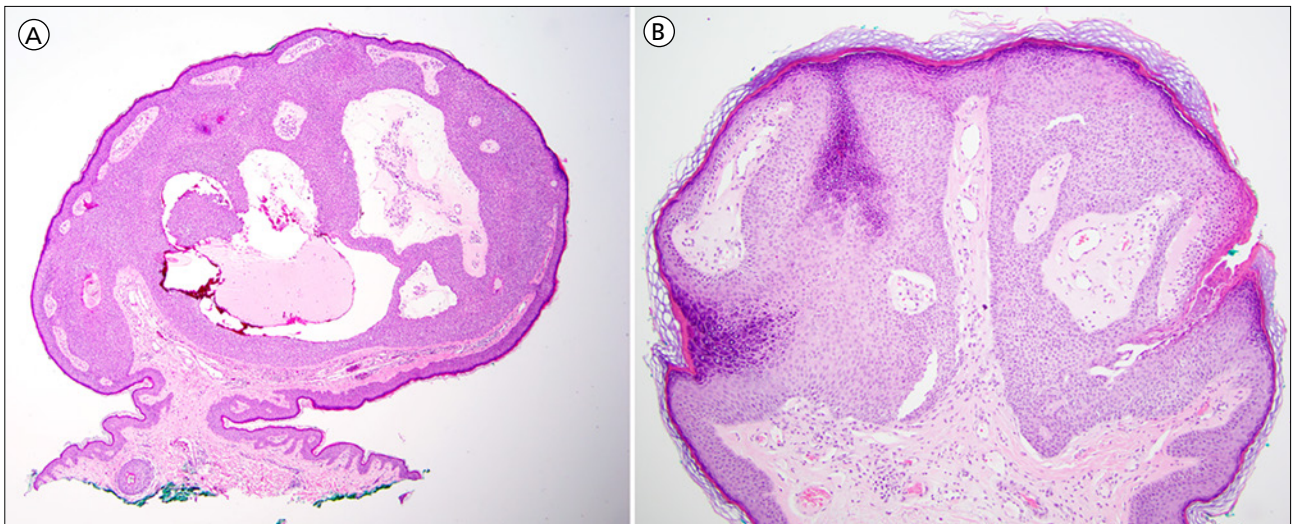
What is the diagnosis?



**Figure 1.** Non-pigmented eccrine poroma. A) Clinical image showing a pink papule on the right upper chest. B) Clinical image showing a pink papule on the presternal chest. [Copyright: ©2017 Wolner et al.]



**Figure 2.** Non-pigmented eccrine poroma. Polarized, non-contact dermoscopy images of a pedunculated pink papule with irregular branching vessels that terminate in circular and semi-circular structures. A is from Case 1 and B is from Case 2. [Copyright: ©2017 Wolner et al.]



**Figure 3.** A) Non-pigmented eccrine poroma: photomicrograph showing an exophytic, well-circumscribed nodular epithelial tumor with uniform cuboidal cells, round basophilic monomorphic nuclei, and sclerotic vascularized “poroma stroma” (hematoxylin-eosin stain, original magnification X20). B) Non-pigmented eccrine poroma: photomicrograph showing a pedunculated epithelial proliferation characterized by sharply demarcated broad epithelial downgrowths of cuboidal cells and characteristic sclerotic and vascular stroma (hematoxylin-eosin stain, original magnification X20). [Copyright: ©2017 Wolner et al.

## Answer

Eccrine poroma

## Discussion

Eccrine poromas are benign cutaneous adnexal neoplasms with terminal eccrine duct differentiation. In 2016, Ito et al reviewed 376 lesions and found that eccrine poromas occur most frequently on the lower extremities (44.4%), followed by the scalp (16.2%), trunk (11.7%), upper extremities (11.4%), face (9.8%), and neck (3.7%) [1]. Typically eccrine poromas appear as solitary plaques, papules, or nodules, but multiple tumors can be seen. Poromas commonly contain highly vascularized stroma but can uncommonly have pigmentation [2].

The differential diagnosis of a non-pigmented papule arising in the field of prior radiotherapy should include amelanotic melanoma, squamous cell carcinoma, adnexal neoplasm, and basal cell carcinoma. Interestingly, eccrine poromas have been associated with radiotherapy and hematologic malignancy [3,4].

The dermoscopic features of nonpigmented eccrine poromas are variable (Table 1). A “polymorphous” vascular pattern consisting of hairpin, glomerular, and irregular linear vessels in a single lesion has been frequently described [3,5-15]. The most common features include a structureless pink-white background (48%), hairpin (loop) vessels (47%), “frog-egg appearance” (39%), glomerular vessels (35%), red lacunae (27%), ulcers (24%), linear-irregular vessels (23%), and leaf-like or cherry-tree vessels (21%). The cases described herein showed irregular branching and looped vessels that terminated in semicircular or circular structures, which raised the suspicion for eccrine poroma [7,11]. These vascular structures may correlate with localization of proliferative vessels within the curved “canals” of tumor stroma.

Variation among dermoscopic characteristics reported in the literature can depend on whether contact and/or polarized dermoscopy was used, the location of the lesion, or variation in the angles of the tumor and the dermatoscope [10]. Larger studies are needed to determine the sensitivity and specificity of the dermoscopic criteria for eccrine poroma.

**TABLE 1. A literature search identified eleven case reports and series identifying dermoscopic characteristics of nonpigmented eccrine poromas [3,5-15]**

Author/Year	Cases N	Hairpin or Loop Vessels N (%)	Dotted Vessels N (%)	Linear-Irregular Vessels N (%)	Vascular Blush N (%)	Comedo-Like Openings N (%)	Milia-like cysts N (%)	Ulcer N (%)	Cherry-blossom vessels N (%)	Structureless-Pink white areas N (%)	Glomerular vessels N (%)	Red Lacunae N (%)	Frog egg or reddish/white globules w/ interlacing white cords N (%)	White-to-pink halo N (%)
Shalom et al (2012)	19	9 (47%)	-	-	12 (63%)	-	-	8 (42%)	8 (42%)	15 (79%)	10 (53%)	2 (11%)	9 (47%)	-
Espinosa et al (2012)	13	5 (38%)	-	3 (23%)	-	-	-	3 (23%)	4 (31%)	9 (69%)	2 (15%)	9 (69%)	5 (38%)	-
Minagawa et al (2010)	10	4 (40%)	3 (30%)	2 (20%)	-	1 (10%)	1 (10%)	1 (10%)	-	-	-	-	9 (90%)	-
Ferrari et al (2009)	7	5 (71%)	-	3 (43%)	-	-	-	1 (14%)	-	5 (71%)	5 (71%)	-	1 (14%)	5 (71%)
Lallas et al (2015)	6	2 (33%)	2 (33%)	2 (33%)	-	1 (17%)	-	1 (17%)	-	-	1 (17%)	1 (17%)	-	2 (33%)
Avilés-Izquierdo et al (2009)	2	2 (100%)	-	2 (100%)	-	-	-	-	-	-	2 (100%)	2 (100%)	-	-
dos Santos (2015)	1	-	1 (100%)	-	-	-	-	-	-	-	-	1 (100%)	-	1 (100%)
Aydingoz (2009)	1	-	-	-	-	-	-	-	1 (100%)	-	-	-	-	-
Nicolino et al (2007)	1	-	-	1 (100%)	-	-	-	-	-	-	1 (100%)	1 (100%)	-	1 (100%)
Altamura et al (2005)	1	1 (100%)	1 (100%)	1 (100%)	-	-	-	1 (100%)	-	-	-	1 (100%)	-	-
Sgouros et al (2013)	1	1 (100%)	-	1 (100%)	-	-	-	-	-	1 (100%)	1 (100%)	-	-	-
TOTAL	62	29 (47%)	7 (11%)	15 (24%)	12 (19%)	2 (3%)	1 (2%)	15 (24%)	13 (21%)	30 (48%)	22 (35%)	17 (27%)	24 (39%)	9 (15%)

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