

# The Shield Sign of Cutaneous Metastases Is Associated With Carcinoma Hemorrhagictoides

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To the Editor:

We read with interest the Case Letter from Wang et al<sup>1</sup> (*Cutis*. 2023;112:E13-E15) of a 60-year-old man whose metastatic salivary duct adenocarcinoma manifested with the shield sign as well as carcinoma hemorrhagictoides. Cutaneous metastases have seldom been described in association with salivary duct carcinoma.<sup>2-7</sup> In addition, carcinoma hemorrhagictoides-associated shield sign has not been commonly reported.<sup>5,8-12</sup>

Salivary duct carcinoma—an uncommon head and neck malignancy characterized by androgen receptor expression—rarely is associated with cutaneous metastases. Based on a PubMed search of articles indexed for MEDLINE using the terms *cutaneous*, *metastatic*, *salivary duct carcinoma*, and/or *skin*, including the patient described by Wang et al,<sup>1</sup> there have been 8 individuals with cutaneous metastases from this cancer. The morphology of the cutaneous metastases has varied from angiomatous to angiokeratomalike (black and keratotic) papules, bullae, macules (red), papules and nodules (erythematous and scaly), plaques (cellulitislike and confluent that were purpuric, hemorrhagic, and violaceous), pseudovesicles, purpuric papules, subcutaneous nodules, and an ulcer (superficial and mimicked a basal cell carcinoma).<sup>1-7</sup> Remarkably, 4 of 8 patients (50%) with salivary

duct carcinoma cutaneous metastases presented with a shield sign,<sup>5,7</sup> including the case reported by Wang et al.<sup>1</sup>

The shield sign is a distinctive clinical manifestation of cutaneous metastasis.<sup>10</sup> It was named to describe the skin metastases located predominantly on the chest area that would be covered by a medieval knight's shield<sup>5,10,12</sup>; metastatic lesions also have been noted on the proximal arm and/or the upper back in a similar distribution.<sup>8,9</sup> To date, based on a PubMed search of articles indexed for MEDLINE using the search terms *breast cancer*, *carcinoma*, *hemorrhagictoides*, *metastases*, *salivary duct carcinoma*, *shield*, and/or *sign*, the shield sign has been described in 6 patients with cutaneous metastases either from salivary duct carcinoma (4 patients)<sup>1,5,7</sup> or breast cancer (2 patients).<sup>8,9</sup> The shield sign pathologically corresponds to carcinoma hemorrhagictoides, an inflammatory pattern of cutaneous metastases.<sup>5,11</sup>

Inflammatory cutaneous metastatic carcinoma has 3 distinctive clinical and pathologic manifestations.<sup>11</sup> Carcinoma erysipelatoides and carcinoma telangiectoides were the earlier described variants.<sup>11</sup> In 2012, carcinoma hemorrhagictoides was described as the third pattern of inflammatory cutaneous metastasis.<sup>5</sup>

Carcinoma erysipelatoides, which clinically mimics cutaneous streptococcal cellulitis, appears as a well-defined

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erythematous patch or plaque; the tumor cells can be found in the lymphatic vessels and either are absent or minimally present in the dermis. Carcinoma telangiectoides, which clinically mimics idiopathic telangiectases, appears as an erythematous patch with prominent telangiectases; the tumor cells can be found in the blood vessels and are either absent or minimally present in the dermis. Carcinoma hemorrhagioides appears as purpuric or violaceous indurated plaques; the tumor cells are not only found in the blood vessels, in the lymphatic vessels, or both, but also can be mildly to extensively present in the dermis.<sup>5,10,11</sup>

In conclusion, the shield sign is a unique presentation of inflammatory cutaneous metastatic carcinoma, which is associated with carcinoma hemorrhagioides. The clinical features of the infiltrated plaques correspond to the presence of tumor cells in the blood vessels, lymphatic vessels, and the dermis; in addition, the purpuric and violaceous appearance correlates with the presence of extravasated erythrocytes or hemorrhage in the dermis. To date, half of the patients with skin metastases from salivary duct carcinoma have presented with carcinoma hemorrhagioides-associated shield sign.

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#### Authors' Response

We appreciate and welcome the comments provided by the authors. Drawing attention to unusual pathologic manifestations of cutaneous metastatic salivary duct carcinoma manifesting with the shield sign, the authors present a comprehensive review of 3 distinctive presentations: carcinoma erysipelatoides, carcinoma telangiectoides, and carcinoma hemorrhagioides. The inclusion of these variants enriches the discussion and makes this letter a valuable addition to the literature on cutaneous metastatic carcinoma, particularly metastatic salivary duct carcinoma.

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