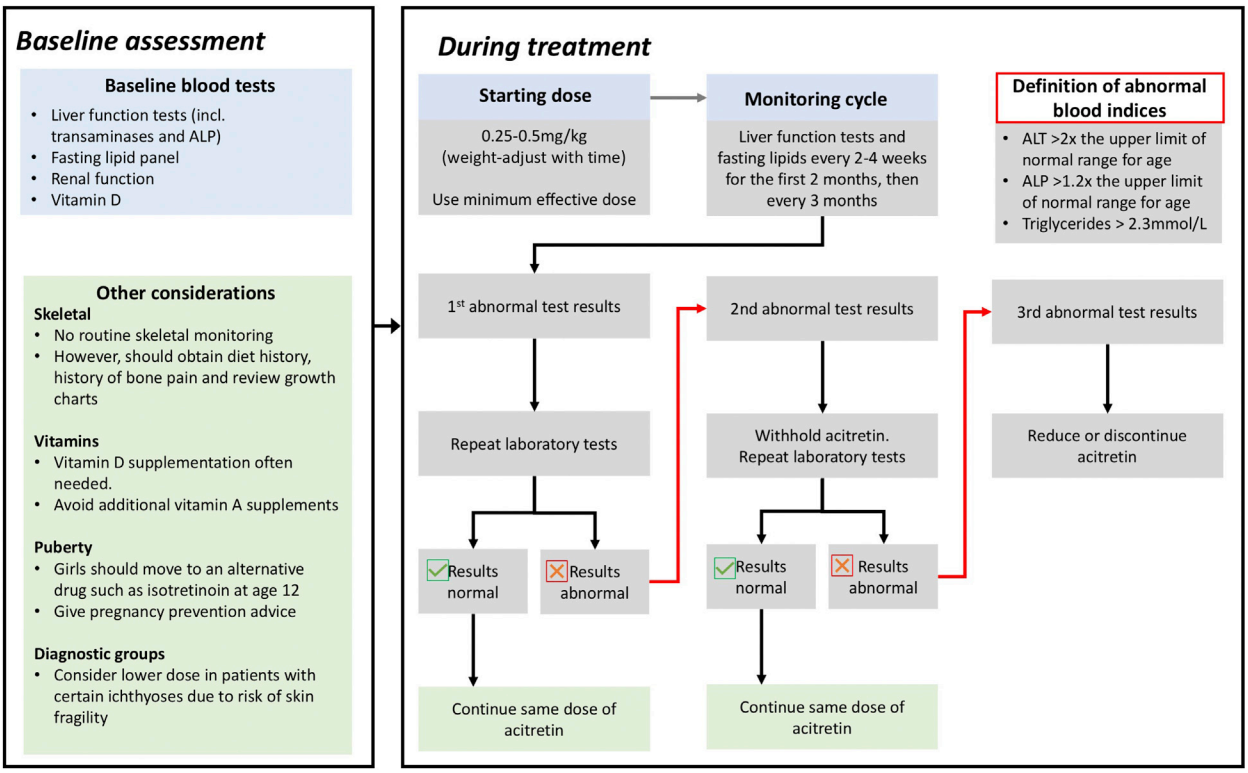

Fig 1. Suggested guidelines for monitoring the use of acitretin in children in association with the published guidelines in adults. *ALP,* Alkaline phosphatase; *ALT,* alanine transaminase.

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Reflectance confocal microscopy as a diagnostic tool for mastocytoma in children

To the Editor: Mastocytoma is a variant of cutaneous mastocytosis, and its diagnosis is confirmed by histopathology. Because this condition primarily affects children, dermoscopy and reflectance confocal microscopy (RCM) are potentially useful

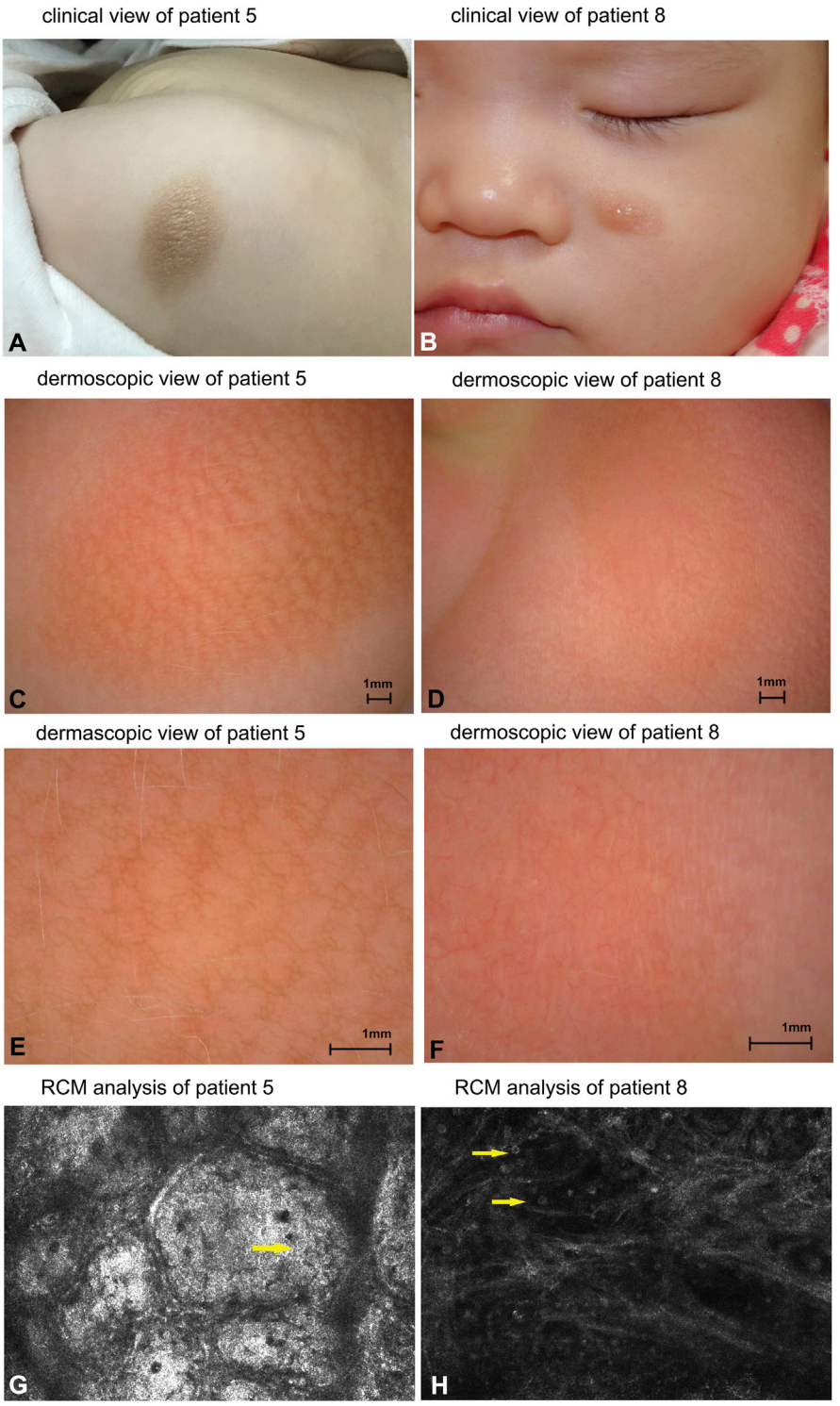

Fig 1. Clinical, dermoscopic, and RCM findings in the mastocytoma cohort. **A and B**, Clinical manifestations in patients 5 and 8. **A**, Brown plaque on the left shoulder. **B**, Reddish-brown plaque with central vesicle on the left cheek. **C and E**, Dermoscopic findings in patient 5 showing fine brown reticular lines and yellow-orange blot (homogeneous blotch with an ill-defined border). **D and F**, Dermoscopic findings of patient 8 showing yellow-orange blot and thin reticular telangiectasias at the periphery. **G**, RCM analysis of a lesion in patient 5 (0.5 × 0.35 mm). Dense infiltrations of poorly demarcated cells with bright and granular cytoplasm (yellow arrow) at the edged papillae were evident. **H**, RCM analysis of a lesion in patient 8 (0.5 × 0.35 mm). Bright rounded cells were found to be scattered between the collagen in the papillary dermis. *RCM*, Reflectance confocal microscopy.

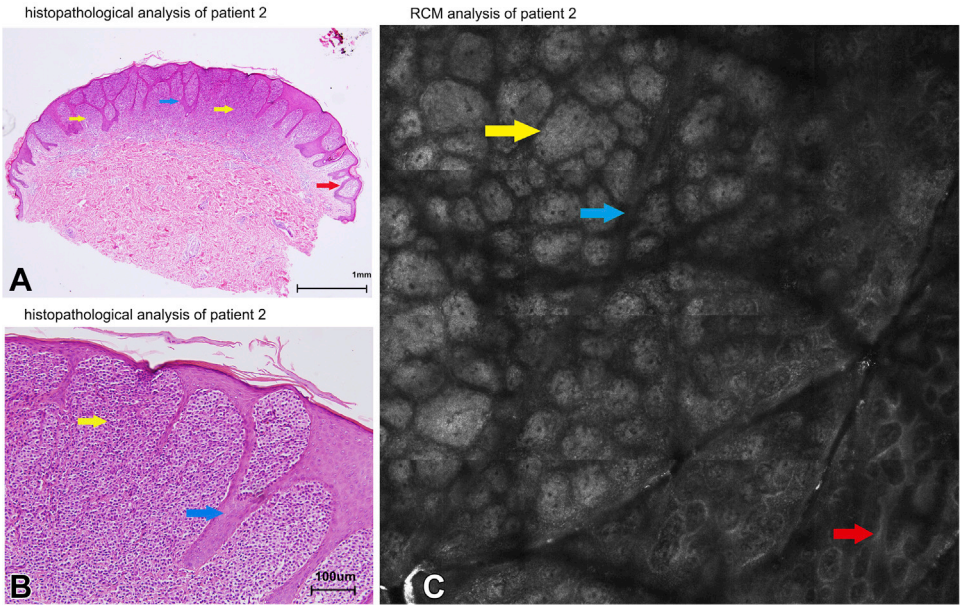

Fig 2. RCM and histologic findings in patient 2. **A and B**, Hematoxylin-eosin staining (A, original magnification: ×40; B, original magnification: ×200) showed a dense infiltration of mast cells along with the papillary and reticular dermis. **C**, RCM analysis of a viva block mosaic (2 × 2 mm) indicating a clod pattern. In detail, the dilated papillae were filled with medium reflective cells that formed nests. Within these nests, the contours of the aggregates are less defined, with a bright and granular cytoplasm (yellow arrows). The tumor-like deposits were separated by rete ridges (blue arrows). The ringed appearance of the dermal papillae (red arrows) of normal skin could be seen beside the lesion. *RCM*, Reflectance confocal microscopy.

complementary diagnostic tools because they are noninvasive. Using RCM (Vivascope 1500; Lucid Inc, Rochester, NY) and dermoscopy (CBS-908; CBS Inc, Wuhan, China), we retrospectively analyzed 8 cases of mastocytoma that had previously been diagnosed between 2014 and 2018.

The 8 patients presented with solitary red or brown nodules on the face, trunk, or upper limb (Fig 1, *A* and *B*), and flushing could be induced occasionally by rubbing some lesions. Yellow-orange or red-brown blots (structureless areas), fine brown reticular lines, and delicate reticular telangiectasias were observed on dermoscopy (Fig 1, *C-F*). RCM showed a clod pattern at the dermoepidermal junction and large medium-reflecting cells aggregated in the nests between the rete ridges (Fig 2, *C*). The aggregates were poorly demarcated with bright and granular dots, usually with no visible nucleus (Fig 1, *G*).

There have been few reports on using noninvasive techniques to diagnose mastocytoma.[1,2] It was shown previously that solitary nodular mastocytoma displays a yellow-orange blot pattern,[1] which was observed in our present cases; these yellowish, structureless areas corresponded to the accumulation of mast cells. The clustered and poorly demarcated cells rich in bright granules found on RCM also showed an excellent correlation with the histologic characteristics of mastocytoma, that is, a dense infiltration of mast cells with abundant eosinophilic cytoplasm along the upper dermis (Fig 2, *A* and *B*). However, not all of the lesions in our current study cohort displayed the same features. In patient 8, RCM showed a low refractive area of the dermoepidermal junction, with round clear cells scattered between collagen, which may correlate with blistering of the lesion (Fig 1, *H*).

RCM can help us differentiate mastocytoma from other nodular lesions in childhood, such as Spitz nevus, dermal nevus, or juvenile xanthogranuloma (JXG). The lesions in mastocytoma are present on RCM in a clod pattern, which is similar to dermal nevus or nodular Spitz nevus but different from JXG pattern. In JXG, RCM shows multiple large, rounded cells with a hyper-refractile peripheral ring at the superficial dermis.[3] However, the "nests" of mastocytoma look different from melanocyte proliferation. In nodular Spitz nevus, nests are usually separated by acanthosis (honeycomb pattern) and compact aggregates.[4] In dermal nevi, nests usually present with monomorphic large round cells or clearly outlined polygonal cells, and those nests are

separated by rings.[5] In mastocytoma, however, the contours of the aggregates are less defined, with some large medium-reflecting cells and no visible nucleus. Moreover, the nests of mastocytoma are separated not by acanthotic epidermis or by rings, but by rete ridges.

In conclusion, RCM is a noninvasive method for diagnosing mastocytoma in children. To our knowledge, this is the first report on RCM findings in mastocytoma. Because of the small sample size in our present analyses, large-scale studies are required in the future to confirm our findings.

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Importance of pathology review to complement clinical management of melanoma

To the Editor: The evaluation of melanocytic lesions is challenging and nuanced. Referral centers for melanoma often request the original biopsy to render a second opinion as part of a multidisciplinary tumor board. We sought to determine the interobserver agreement between pathologists in the diagnosis of melanoma and discuss the impact on patient management. We expected that the vast majority of cases would show agreement in the diagnosis. In the small percentage of cases where there was discordance in the diagnosis, we opened a longer discussion of potential management options with the patient, including seeking a third opinion. The study was approved by the institutional review boards at MedStar Georgetown University and the Inova Schar Cancer Institute.

We reviewed all available pathology reports with a diagnosis of melanoma referred to the Melanoma and Skin Oncology Center at the Washington Cancer Institute between July 2009 and October 2014 and the Inova Melanoma and Skin Cancer Center between May 2015 and May 2016. The lesions were staged according to the American Joint Committee on Cancer (AJCC), seventh edition, melanoma staging criteria. Discordance was defined as lack of agreement in diagnosis, clinical stage, or histopathologic parameter. Statistical analysis was performed with R (R Core Team, 2013). For categorical variables, the Cohen's kappa (κ) statistic was used to measure the agreement between the original dermatopathologist and the consultant rendering the second opinion (Table I).

In total, 777 patients were referred with a biopsy-confirmed diagnosis of melanoma or a borderline melanocytic lesion. Of these cases, 623 of 777 had both initial and second opinion pathology reports available for comparison. The second opinion led to a change in diagnosis or stage in 14% of cases (87/623). Among the melanoma cases, the lesion was upstaged to a higher AJCC stage in 46% of cases (40/87) and