CAM use is similar among those who do and do not attend dermatology outpatient clinics.

Our results suggest that CAM is used more often in chronic skin conditions (eg, acne and eczema) rather than in acute skin conditions. Herbal therapies are the most commonly used CAM and may reflect that CAM therapies typically rely on herbal treatments.

There are several limitations to this study. Our survey was limited to English, and the respondents were predominantly of white ethnicity. Complementary and alternative edicine use is more prevalent among those who are nonwhite, and this may explain why our prevalence rates are lower than studies that have examined a more general US population. Our sampling is representative of Sacramento, California. Broader studies involving other regions are needed before drawing conclusions that would be relevant to a more general population. Because we conducted the survey anonymously, self-reported diagnoses could not be verified.

Physicians need to be aware that their patients may be engaged in CAM use for skin-related conditions, such as acne and eczema. Further clinical and basic science studies are needed to better understand their efficacy and mechanisms of action.

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Differential Radiation Dermatitis in Native Skin and an Autologous Transplanted Myocutaneous Flap

In this case, radiation dermatitis (RD) is characterized by a differential response in 2 developmentally equivalent tissues from distinct anatomic locations.

Report of a Case | A man in his 50s presented with a gradually enlarging erythematous patch on the upper chest overlying an area of surgery performed 12 years before for the removal of a neurotropic basal cell carcinoma (Figure A). Computed tomographic–positron emission tomographic scans revealed an infiltrative mass (10 cm) invading the osseous structures of the anterior chest wall and soft tissues of the neck, which prompted their radical resection. This was followed by reconstruction with an autologous myocutaneous free flap harvested from the anterolateral thigh (Figure B). After an uncomplicated 3-month postoperative course and flap “take,” a cumulative radiation therapy (RT) dose of 66 Gy (33 fractions) was delivered over 6.6 weeks.

During RT, the patient reported a pruritic, erythematous eruption outside the flap, but within the RT target volume. The eruption conspicuously spared the skin of the free flap. At an RT dose of 56 Gy in 23 fractions (5.6 weeks from start of RT), the patient developed a grade 2 RD outside the flap (Figure C). A grade 1 RD was noted over the flap, consisting of faint erythematous papules. In vivo dosimetry of sites exhibiting the differential pattern (Figure C, inset) excluded inconsistent dosing. Cultures from outside the flap in areas with erythema and pustules grew methicillin-sensitive Staphylococcus aureus. A 5-day course of oral antibiotics and topical corticosteroids improved the symptoms, with complete resolution by 12 weeks without recurrence.

Discussion | The reasons for RD relatively “sparing” skin within the transplanted flap are unknown. In a small series, the response of autologous split- and full-thickness grafts to RT ranged from pronounced radiosensitivity to relative radioresistance; fresh grafts (<3 months old) were prone to developing brisk and more vigorous reactions than normal skin, while older grafts (>1 year old) tended to be relatively radioresistant. The tolerance to RT was similar in grafts that were 3 months to 1 year old, and differential reaction patterns were not described. It was noted that recovery from RD may be delayed in fresh grafts or absent in old grafts.

Similar studies involving flaps are sparse. Wang et al4 found that the rate of acute toxic effects in some reconstructed
free and pedicle flaps was significantly lower (radioreistance) than in the surrounding normal tissues, and they attributed it to mild tissue hypoxia. Also, in his discussion, Withers noted that myocutaneous flaps and free flaps showed less skin damage from postoperative radiation than skin grafts and pedicle flaps, which suggests that the response to radiation is dependent on graft and/or flap vascularity, as shown in rat the models described by Sumi et al. The effect of the anatomical origin of transplanted skin has not been considered a factor influencing the development of RD. In our patient, RT was administered 3 months after a microsurgical flap reconstruction. Although this leads to the restoration of vascular and lymphatic flow within days, the extent of revascularization and immune surveillance in the skin of flaps is not known. Scar remodeling peaks at around 3 to 6 months. It is not clear whether any of these factors might have affected inflammatory responses (free radical generation) in flap skin due to disruption of collateral processes or poor inflammatory cell trafficking to locoregional nodes. The role of variations in regional skin thickness (thicker in the thigh [54.3 μm] vs the chest [37.6 μm]), prior sun exposure (chest > thigh), severance of neural networks, and bacterial flora needs to be determined.

Our observations suggest that the anatomic-physiologic condition of the irradiated native skin, or its competence, has a clear role in determining the outcome.

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A. Prior to surgery, an infiltrative basal cell carcinoma of the upper chest had invaded the sternum, manubrium, left clavicle, and soft tissues of the anterior mediastinum and neck. B. Clinical image taken after autologous myocutaneous free flap reconstruction, following radical resection of the anterior chest wall and bilateral neck dissection. C, Grade 2, radiation dermatitis manifesting as brisk erythema with dry desquamation over the neck and upper chest; note the marked sparing of the skin within the flap (inset).
Lymphoepithelioma-like Carcinoma vs Inflamed Squamous Cell Carcinoma of the Skin

Lymphoepithelioma-like carcinoma of the skin (LELCS) is a very rare primary skin neoplasm that most frequently occurs on the sun-exposed skin of the head and neck in elderly individuals. The histogenesis of LELCS remains controversial between an adnexal origin vs an inflamed squamous cell carcinoma (SCC). It has a small tendency toward local recurrence and very limited metastatic potential. Only a few cases have reported metastasis to lymph nodes and internal organs.

Report of Cases | Case 1
A man in his 60s with no significant medical history presented with a solitary asymptomatic indurated plaque on his right temple and a palpable nodule in the right parotid gland. Biopsy of the temple showed an infiltrate of atypical cells in the mid and deep dermis with small nucleoli, scattered mitotic figures, and moderate pink cytoplasm. These atypical cells formed well-defined nests surrounded by dense lymphocytic inflammation (Figure, A and B), and anti-EMA (epithelial membrane antigen) and anti-AE1/AE3 (cytokeratin AE1/AE3 monoclonal antibody cocktail) stainings were positive. Findings of fine-needle aspiration of the parotid mass were also positive for carcinoma.

Wide excision of the right temple lesion and right total parotidectomy were performed. Histologic examination of the right temple lesion showed residual poorly differentiated carcinoma morphologically consistent with SCC with perineural invasion (Figure, C). These atypical cells stained positive with antibodies against AE1/AE3 (Figure, D). The right parotid mass showed poorly differentiated SCC with a prominent lymphocytic response. Lymphovascular invasion and perineural invasion were also identified. The patient underwent postoperative radiotherapy, and there was no evidence of recurrence in 5 years of subsequent follow-up.

Case 2. A man in his 60s underwent multiple excisional biopsies for the same lesion on his left preauricular cheek over the course of 5 years. Pathologic analysis of those excisions showed well-differentiated SCC on the earliest specimens (eFigure, A in the Supplement), moderately differentiated SCC on the next specimens (eFigure, B in the Supplement), and LELCS on the most recent specimens (eFigure, C in the Supplement). In the most recent specimens, there was horizontal fibrosis of the superficial dermis with underlying dense nodular infiltrates in the deep dermis composed of atypical epithelioid cells centrally with a brisk surrounding lymphocytic infiltrate (eFigure, C in the Supplement). The atypical epithelioid cells stained strongly with antibodies against AE1/AE3 and EMA (eFigure, D in the Supplement). Indirect nasolaryngoscopy and Epstein-Barr virus immunoperoxidase staining excluded metastasis from a lymphoepithelioma of the nasopharynx. The tumor was cleared with 2 stages of Mohs micrographic surgery. On the first Mohs layer, perineural invasion was seen. The patient is currently under close follow-up.

Discussion | Currently, LELCS is classified as a variant of SCC, but there is still some debate on the origin of this disease. Both of our cases suggest that markedly inflamed SCC strongly resembles LELCS. In our first case, the primary skin biopsy resembled LELCS, while the reexcision and the parotid metastasis were more characteristic of poorly differentiated SCC. More interestingly, in our second case, the LELCS recurrence originated below the scar from excision of a multiply recurrent SCC, and the course of the disease showed the whole sequential spectrum of lymphoid infiltration and cellular anaplasia.

Although morphologically poorly differentiated, LELCS has been reported as having lower malignant potential than classic SCC, with rare metastases. However, in both of our cases, perineural invasion was identified, with a metastasis to the ipsilateral parotid in the first case. The courses of the disease in our cases, along with the published reports of metastasis to lymph nodes and internal organs with mortality, suggest that LELCS may infiltrate, recur, metastasize through lymphovascular or perineural invasion, and cause death.