Streamlining Care for Skin Cancers in the COVID-19 Pandemic

he emergence of coronavirus disease 2019 (COVID-19) has impacted health care delivery. Management of skin cancer has not been exempt from these disruptions, resulting in delays in diagnosis, surgical interventions, and surveillance appointments.¹ Although early and complete surgical removal is the optimal malignant melanoma treatment, National Comprehensive Cancer Network (NCCN) guidelines released during the COVID-19 pandemic recommended delaying management of some cases.² Patient's fear of seeking care because of COVID-19 risk can further delay treatment.³ A survey conducted in June 2020 showed that approximately 40% of adults in the United States elected to postpone or avoid medical care because of COVID-19-associated risks.⁴ The following cases present scenarios where disruptions imposed by COVID-19 lead to delays in proper diagnosis and intervention, potentially contributing to increased tumor depth and poorer outcomes.

Patient 1

In June 2020, a 67-year-old lung transplant recipient with a history of multiple keratinocytic carcinomas (KCs) presented for frozen biopsy and Mohs micrographic surgery (MMS) of a pink tumor present for 2 to 3 months clinically concerning for cutaneous squamous cell carcinoma (CSCC) (Figure 1A). Frozen biopsy showed nested atypical melanocytes, and permanent H&E sections confirmed the diagnosis of a 6.5-mm ulcerated melanoma. Because of risks associated with her bilateral lung transplant, sentinel lymph node biopsy (SLNB) was not advised. The patient underwent wide local excision (WLE) and will undergo ultrasound and positron emission tomography/computed tomography (PET-CT) scans surveillance.

Patient 2

An 83-year-old man with a history of CSCC was evaluated by telemedicine in April 2020 for a tumor on the forearm present for 2 to 3 months and clinically concerning for a CSCC (Figure 1B). Frozen biopsy and MMS in May 2020 exhibited

an invasive melanoma. Permanent H&E sections confirmed the diagnosis of a 7-mm ulcerated melanoma. Because of limited access to SLNB during the pandemic, additional 1-cm margins were taken at the time of MMS and sent for permanent sections, which showed no residual tumor. Followup PET-CT showed increased size and fluorodeoxyglucose avidity of the right axillary lymph node. Biopsy confirmed the diagnosis of metastatic melanoma. Considering the patient's advanced age and performance status, surgery was not recommended, and the patient initiated nivolumab.

Patient 3

In August 2020, a 71-year-old man with a history of hundreds of KCs presented for frozen biopsy and MMS of a clinically suspected KC on the preauricular cheek present for 3 months (Figure 1C). Frozen biopsy at the time of MMS was concerning for an invasive melanoma. Permanent H&E sections confirmed the diagnosis of a 0.9 mm ulcerated melanoma. Positron emission tomography-CT from July 2020 was negative for metastatic disease. Because of prior facial procedures, SLNB was deferred. The patient underwent WLE and will be followed with ultrasounds and PET-CTs.

Disscussion

The COVID-19 pandemic poses novel challenges regarding time sensitive care and management of skin cancers, with health care delivery balanced delicately between COVID-19 exposure risk and the potential for delayed diagnosis and disease progression. The NCCN released a statement during the COVID-19 pandemic which advised reserving biopsies for growing, or highly concerning lesions and melanoma treatment could be delayed up to 3 months for certain cases.⁵ These guidelines contrasted with prior recommendations which advocated for timely removal of tumors, raising the question of how postponing intervention may impact outcomes. Although many patients are now being encouraged to pursue medical care despite the COVID-19 surge, some are choosing to delay care because of concerns related to COVID-19.^{3,4}



Figure 1. Clinical findings. (A) Eroded pink tumor, proximal dorsal right upper arm. (B) Ulcerated pink–tan–brown plaque, distal dorsal right upper arm. (C) Pearly pink papule (arrow), right preauricular cheek.

Communications

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In the cases detailed herein, diagnosis and treatment of melanomas were delayed because of both state stay at home recommendations as well as patient preference to minimize appointments. These cases were diagnosed after the shutdown in Massachusetts, which was one of the harder hit regions with the initial COVID-19 wave. At that time, personal protective equipment (PPE) and knowledge on virus transmission were limited. However, with improved COVID-19 resources, it is important to counsel patients who are nervous about seeking care, especially those with new tumors, about measures implemented to mitigate COVID-19 transmission, including PPE, staff vaccination and testing programs, and minimizing patient interactions.

The COVID-19 pandemic presents new obstacles in the treatment of cancer. Delays in care are multifactorial, but identifying patients who are worried about seeking care and providing education on mitigation strategies could help to minimize delays resulting in adverse outcomes.

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Patient Crowdfunding for the Treatment of Cutaneous Malignancies

nline crowdfunding, described as the use of social media platforms "to [pool] a large number of smaller contributions to support a specific initiative," is increasingly used to fund medical care.¹ Fundraising participants can post photographs, updates, detailed personal narratives, and information about their health on platforms to inspire support. However, fraudulent requests and fundraising for unproven therapies can inappropriately delegate donations and delegitimize real campaigns. Nevertheless, crowdfunding for medical treatment continues to grow. Little is known about the current state of crowdfunding for cutaneous malignancy treatment costs. We accordingly examined crowdfunding campaigns for the treatment of cutaneous malignancies, paying particular attention to factors associated with successful campaigns. As crowdfunding continues to grow, it is important for dermatologists to understand its impact and characteristics to better inform patient care in an increasingly digital world.

Methods

We searched GoFundMe, a popular crowdfunding site, for active campaigns funding treatment of cutaneous melanoma, basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and cutaneous T-cell lymphoma (CTCL) treatment. All campaign descriptions (i.e., funds raised/requested, length of campaign, inclusion of physician name, use of scientifically unsupported treatment, surgical treatment, etc) were reviewed manually by 2 independent investigators. Campaigns were counted as "reporting use of scientifically unsupported treatment" if they mentioned use of treatments outside of National Comprehensive Cancer Network Guidelines. Variables were tabulated, and statistical analysis was conducted using analysis of variance with a significance level of p < .05. A sensitivity analysis was conducted to exclude campaigns with inadequate fundraising time (See **Supplemental Digital Content 1**, Figure S1, http://links.lww.com/ DSS/A617). This study was deemed exempt by the Stanford Institutional Review Board.

Results

Six hundred forty-five campaigns were included in the final analysis (median active time = 18 months; Interquartile Range = 7.5-37 months). Most campaigns were created to fund treatment for melanoma (408, 63.3%), followed by BCC (104, 16.1%), CTCL (67, 10.4%), and SCC (66, 10.2%) (See Supplemental Digital Content 2, Table S1, http://links.lww.com/DSS/A618). Cutaneous T-cell lymphoma campaigns raised the most funds (\$9,224, IQR \$1,575-\$9,205), followed by melanoma campaigns (\$6,033, IQR \$1,611-\$6,621), SCC campaigns (\$5,411, IQR \$855-\$5,681), and BCC campaigns (\$5,024, IQR \$717-\$4,308). Squamous cell carcinoma campaigns had the highest proportion of total amount raised/total amount sought, at 38.4%, with BCC at 36.6%, melanoma at 34.1%, and CTCL at 18.4%. A minority of campaigns (76, 11.8%) met funding goals.

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