
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

of the identified drugs in a panel of melanoma tumor cell lines. The half maximal inhibitory concentration values were retrieved from the National Cancer Institute database (http://dtp.nci.nih.gov). Idarubicin, which is already known for its activity against breast cancer, lymphoma, and leukemia,[3-5] revealed higher cytotoxicity than both sorafenib and vemurafenib (Supplemental Fig 3). Disease indications and modes of action of Food and Drug Administration-approved drugs identified by virtual drug screening are summarized in Supplemental Table II.

In conclusion, a combined concept consisting of diverse virtual drug screening methods, chemical libraries for drug repurposing, and *in vitro* testing may help to make beneficial predictions on small molecules for inhibiting distinct mutated proteins and to improve cancer therapy for each patient.

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## Surgical delay and mortality for primary cutaneous melanoma

*To the Editor:* During the COVID-19 shutdown, the standard of care for melanoma treatment has been temporarily modified. The National Comprehensive Cancer Network (NCCN) and Society of Surgical Oncology recommended that excisional biopsies be performed whenever possible and that wide local excision and sentinel lymph node biopsy be deferred for up to 3 months for lesions with clear histologic margins (Fig 1).[1,2] This decision was justified by the claim that "most time-to-treat studies show no adverse patient outcomes following a 90-day treatment delay," but the supporting evidence has not been clearly presented.

We performed a literature review and identified 7 studies that address surgical delay and melanoma survival (see Supplementary Materials for references and study details; available via Mendeley at https://doi.org/10.17632/wyx96j2pcj.2). Of these, 5 studies examined outcomes related to 1 month or longer melanoma surgical delay, which was the relevant timeframe for COVID-19 recommendations. Of the 5 publications, 3 reported no decrease in survival. McKenna et al. showed no survival effects for delaying surgery 30 to 90 days (15-28 d: hazard ratio [HR], 0.86; 95% confidence interval [CI], 0.54-1.39; 29-42 d: HR, 0.92; 95% CI, 0.55-1.54; 43-91 d: HR, 0.92; 95% CI, 0.54-1.56), using a study design that included only melanomas with excisional biopsies.[3] Carpenter et al. and Crawford et al. similarly did not find any association between delayed melanoma surgery and mortality. Eight of 9 studies also showed that delayed sentinel lymph node biopsy did not increase mortality.

In contrast, Conic et al. and Basnet et al. concluded that delayed wide local excision increases mortality, but they provide only a single counterexample, as both studied the same data set (the National Cancer Database).[4,5] These studies had a large sample size and showed a consistent pattern of association: as more time passed, survival decreased. Unlike investigators in other studies, Conic et al. stratified their analysis by melanoma stage and followed patients for 3 years instead of 5. They found a significant risk in patients with stage I disease (30-50 d: HR, 1.05; 95% CI, 1.01-1.1) 60-89 d: HR, 1.16; 95% CI, 1.07-1.25). Similar

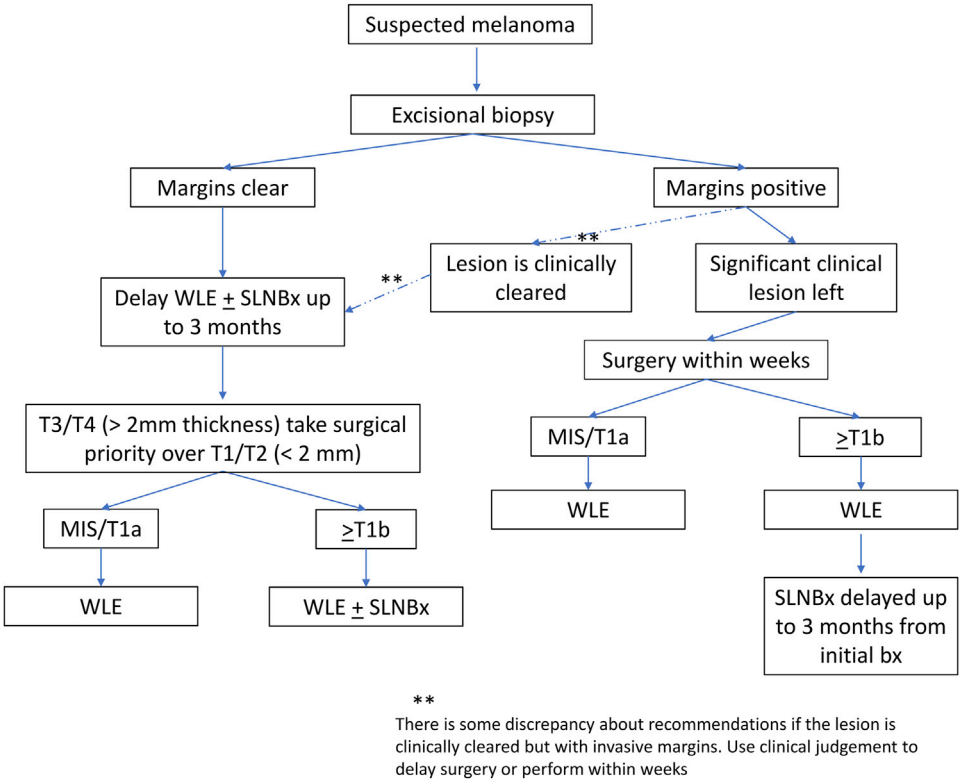


**Fig 1.** National Comprehensive Cancer Network and Society of Surgical Oncology's short-term recommendations for cutaneous melanoma management during the COVID-19 pandemic. *MIS*, melanoma in situ; *SLNBx*, sentinel lymph node biopsy; *WLE*, wide local excision.

to other studies, they did not find increased mortality when all stages were combined (30-59 d: HR, 1.02; 95% CI, 0.99-1.04; 60-89 d: HR, 1.03; 95% CI, 0.99-1.08 or when patients were followed up for 5 years instead of 3 (stage 1, 30-59 d: $P = .06$; 60-89 d: $P = .09$; Supplemental Reference Conic et al; available via Mendeley at https://doi.org/10.17632/wyx96j2pcj.2). Basnet et al.'s findings are currently only available as an abstract publication, limiting comprehensive review of study details.

In summary, 1 large retrospective study reported a significant association of mortality with surgical delay in patients with stage I melanoma, but several other smaller studies did not detect any significant hazards. There is insufficient evidence to definitively conclude that delayed wide resection after gross removal of the primary melanoma is without harm. Like many of the COVID-19 policy decisions, the National Comprehensive Cancer Network/Society of Surgical Oncology guidelines were not strictly evidence-based and were drafted expeditiously when resources were limited and COVID-19 mortality was mounting. Patients with melanoma are typically older (average age, 65 y), often have medical comorbidities, and may have increased all-cause mortality if they contract COVID-19. The contradictory evidence cannot be resolved until a sufficiently powered prospective trial that measures harms from surgical delay and controls for factors such as the effect of patient concern is published.

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## Mycophenolate mofetil for the treatment of cutaneous lichen planus: A retrospective case series

*To the Editor:* Lichen planus is a debilitating, disfiguring condition that may involve cutaneous (CLP) or mucosal surfaces.[1] Although CLP is less chronic, generalized or recalcitrant local cases may require systemic treatment.[2] First-line systemic corticosteroids may be unfavorable because of their adverse effects and association with posttreatment relapse, and efficacy data for steroid-sparing alternatives remain scarce.[2] Mycophenolate mofetil (MMF) may be viable, but data are limited to 1 case report and 1 2-patient case series; all 3 patients (hypertrophic, bullous, and disseminated CLP) achieved remission without significant adverse effects.[3,4] We sought to ascertain MMF's safety and efficacy for CLP with a 10-patient retrospective case series.

Upon institutional review board approval, patients from a single institution who received MMF for generalized or recalcitrant local CLP between 2010 and 2019 were identified in the medical record. Patients with mucosal lichen planus, lichenoid drug eruptions, lichenoid dermatitis, or lichen planopilaris or those lost to follow-up were excluded.

Ten patients—mostly white (70%) and female (80%), with a mean age of 58 years, with hypertrophic (40%), papular (40%), and pigmentosus (20%) CLP—met the inclusion criteria (Tables I and II). MMF was initiated for generalized (70%) and recalcitrant local cases (30%), at daily doses ranging from 1000 to 3000 mg. Fifty percent of patients achieved improvement (2 mild, 2 significant, and 1 remission), mostly those with longer treatment durations (mean, 26.8 vs 7.9 months) and higher dosages (mean, 2200 vs 1200 mg). Most improvements were observed within 9 months—later than the mean onset of MMF's effects for atopic dermatitis (6.8 weeks).[5] The patient who achieved remission displayed markedly fewer lesions and less crusting and reported significant pain relief 16 months after starting MMF. Remission was achieved at 25 months and maintained for 17 months before switching to methotrexate (MTX) because of cost and gastrointestinal upset; she experienced painful flares during MMF tapering. Two patients who experienced significant improvement (markedly fewer lesions, less scaling, and drastic reductions in both pain and pruritus) also experienced flares when discontinuing MMF. Mild improvement (slightly fewer lesions, mild relief of pruritus) was observed in 2 patients, including 1 who experienced worsening pruritus when tapering. Thus, it appears that posttreatment relapse may be a potential concern with MMF therapy. Concomitant medications in patients who achieved improvement were mostly continuations of regimens initiated before MMF (80%) and included triamcinolone, clobetasol, prednisone, and cyclosporine.

First-line topical corticosteroids and topical calcineurin inhibitors failed for all patients before MMF was initiated. Three patients received prednisone, including 1 who improved and relapsed upon discontinuation. Acitretin caused intolerable fatigue, and phototherapy was not attempted. Although encouraging results have been reported with MTX, it had previously failed for 80% of patients who achieved improvement with MMF because of poor results or unbearable nausea, fatigue, and anorexia.[2] MMF was well tolerated; 1 patient experienced a herpes simplex virus infection, and 1 developed anemia. Common discontinuation reasons included lack of efficacy (20%), fatigue (20%), and cost (20%).

Although the variability in lesion locations, CLP subtypes, and concomitant medications precludes definitive conclusions, these results may provide insight into a CLP treatment option that lacks extensive study.

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