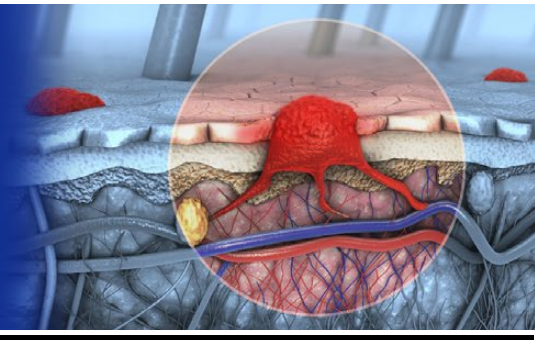
Melanoma Practice Review™



Making Education Easy

Issue 6 - 2021

In this issue:

Abbreviations used in this issue:

AAD = American Academy of Dermatology; **SCC** = squamous cell carcinoma.

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Welcome to the 6th issue of Melanoma Practice Review.

This new Review covers news and issues relevant to clinical practice in melanoma. It will bring you the latest updates, both locally and from around the globe, in relation to topics such as new and updated treatment guidelines, changes to medicines reimbursement and licensing, educational, professional body news and more. And finally, on the back cover you will find our COVID-19 resources, and a summary of upcoming local and international educational opportunities including workshops, webinars and conferences.

We hope you enjoy this new Research Review publication and look forward to hearing your comments and feedback.

Kind Regards,

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Clinical Practice

FDG PET findings post-COVID vaccination

We report four cases recently published in the literature of melanoma patients with hypermetabolic axillary lymphadenopathy on FDG PET following COVID-19 vaccination..

An 86-year-old woman with successfully treated nasal melanoma underwent follow-up 18F-FDG PET, six days after her second dose of Pfizer-BioNTech COVID-19 vaccine in the left arm. 18F-FDG PET showed increase tracer uptake in the left deltoid muscle and in two normal-sized left subpectoral nodes.

A 57-year-old man had melanoma of the right thigh with lung, inguinal lymph node, and spleen metastases in complete remission. Two weeks after his most recent pembrolizumab treatment, PET-FDG revealed newly enlarged multiple lymph nodes in the left axilla, retro pectoral space, and proximal arm, with high FDG. The patient had received two doses of the Pfizer COVID-19 vaccine in his left arm, the last of which was administered 6 days prior to imaging.

A 68-year-old man with right cheek melanoma after resection underwent 18F-FDG PET/CT, which was unremarkable except for multiple FDG-avid subcentimetre but rounded lymph nodes in the left axilla. Three weeks previously, the patient had undergone a COVID-19 vaccination in the left arm.

A 71-year-old man underwent FDG PET/CT for melanoma staging 6 days after a COVID vaccination. Imaging showed a haematoma at the vaccination site, along with extensive axillary lymphadenopathy.

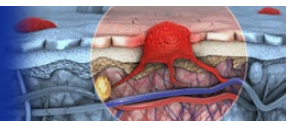
Vaccinations have been previously documented to cause reactive FDG-avid lymph nodes, and as such, the nodes in all four of these cases were considered benign, reactive to the COVID-19 vaccination. The upcoming increase in COVID-19 vaccinations makes this an important finding for the interpreting physician to consider and recognise.

COVID-19 in melanoma patients: Results of the Spanish Melanoma Group Registry, GRAVID study

The initial findings of this registry suggest that melanoma staging and active anti-tumour therapy are not associated with worse COVID-19–related outcomes.

In the descriptive study, the Spanish Melanoma Group presented findings from the first 70 patients enrolled in the national registry of melanoma patients infected by SARS-CoV-2. The majority of patients (56%) had stage IV melanoma and around half (51%) were undergoing active treatment with either anti–PD-1 therapy (31%) or BRAF plus MEK inhibitors (20%). Thirty-eight patients (54%) had no evidence of active tumour (no macroscopic disease). Regarding SARS-CoV-2 infection, 20 patients (29%) were asymptomatic or had mild symptoms, 18 patients (26%) developed severe symptoms, and 20 patients (28%) developed critical symptoms. Overall, 14 patients (21%) died due to COVID-19, and 8 (13%) died from melanoma during the time of data collection. There was no statistically significant association between tumour stage/melanoma treatment and risk of severe or critical COVID-19 infection or death. Limitations of this analysis included a low number of cases.

J Am Acad Dermatol. 2021;84(5):1412-5



US evidence-based clinical practice guideline: Reconstruction after skin cancer resection

A multi-disciplinary working group has published guidelines for the management of reconstruction after skin cancer resection. The guideline was co-developed by the American Academy of Dermatology, American Society of Plastic Surgeons, American Society for Dermatologic Surgery, American Academy of Facial Plastic and Reconstructive Surgery, American Academy of Otolaryngology - Head and Neck Surgery, American College of Mohs Surgery, American Society for Mohs Surgery, and American Society of Ophthalmic Plastic and Reconstructive Surgery.

The aim was to detect areas of common practice and offer evidence-based recommendations to improve patient management. Given the wide variety of reconstructive techniques and clinical settings, investigation focussed on common techniques. In some cases, a distinction was made between management options in an office setting compared to a facility setting. A systematic literature review was conducted, and the GRADE process was used to rate the quality of evidence (Grading of Recommendations Assessment, Development, and Evaluation methodology).

Final recommendations concern the timing of reconstruction, management of anticoagulation, use of antibiotics, methods of pain control, and follow-up assessment. The guideline also provides evidence-based recommendations for surgical reconstruction after resection of skin cancer once clear margins have been achieved. In some cases, there was not enough evidence to make strong recommendations. The authors highlight the need for further high-quality studies in this setting, to guide clinical practice.

J Am Acad Dermatol. April 27, 2021

AAD guidelines of care for the management of actinic keratosis

This guideline from the American Academy of Dermatology (AAD) addresses the management of actinic keratosis (AK), providing evidence-based recommendations for treatment. Grading, histologic classification, natural history, risk of progression, and dermatologic surveillance of AK are also described.

Although they often remain as chronic skin lesions, AK can spontaneously involute, or concerningly, progress into keratinocyte carcinoma if left untreated. Treatment options for AK include field-directed therapies, including topical ointments and photodynamic therapy, and lesion-directed therapies, such as cryosurgery and laser ablation.

A multidisciplinary Work Grouping performed a systematic review to answer five clinical questions regarding the management of AK and applied the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) method for assessing the quality of the evidence and formulating and ranking clinical recommendations. Graded recommendations were voted on to achieve consensus.

Analysis of the data from a systematic review of randomised controlled trials based on five research questions resulted in eighteen evidence-based recommendations.

Strong recommendations were made for the use of UV protection, cryosurgery, topical imiquimod, and 5-fluorouracil. Conditional recommendations were given for the use of photodynamic therapy and diclofenac for the treatment of AK, as monotherapy and as part of combination therapy.

J Am Acad Dermatol. 2021 Apr 2:S0190-9622(21)00502-8

Comparative analysis of diagnostic techniques for melanoma detection: A systematic review of diagnostic test accuracy studies and meta-analysis

Among skin cancers, melanoma has the highest mortality rate, and timely diagnosis is key to improve survival rates. While dermoscopy is the current standard for melanoma diagnosis it has limited diagnostic reliability and reproducibility. Other non-invasive diagnostic techniques may represent an improvement on dermoscopy. The aim of this review was to compare the diagnostic performance of non-invasive techniques in combination with or as an alternative to dermoscopy for melanoma detection.

A comprehensive literature review (2010-September 2020) yielded 62 results. Of those studies, 38 evaluated the diagnostic performance of a specific technique and were included in a Quadas-2 analysis, of which 29 were included in a meta-analysis.

Heterogeneity of studies' types, testing strategy, and diagnostic task limited the systematic comparison of the techniques. Overall, optical spectroscopy scored the highest diagnostic performances (average sensitivity and specificity, 93% and 85.2%, respectively), although there were concerns regarding the robustness and variability associated with these data.

Multispectral imaging was associated with high diagnostic performance (average sensitivity and specificity, 93% and 71.2%, respectively, n=4 studies) but reported the widest confidence intervals range (17.6–96.6% for specificity and 75.3–98.3% for sensitivity).

Electrical impedance spectroscopy, evaluated in five studies, achieved 95% average sensitivity paired with the lowest average specificity among the investigated techniques (48.9%), which also reported a wide confidence interval (30.5–67.6%).

Reflectance-confocal-microscopy, in contrast, demonstrated higher robustness and a good diagnostic performance (sensitivity 88.2%; specificity 65.2%).

Best practice recommendations were suggested by the authors to reduce bias in future diagnostic accuracy test studies.

Front Med (Lausanne). 2021 Apr 21;8:637069

Total body photography for the diagnosis of cutaneous melanoma in adults

Timely detection of melanoma is key to reducing mortality. Total body photography can aid in the detection of melanoma in high-risk patients. This systematic review and meta-analysis aimed to determine the diagnostic accuracy of total body photography for the detection of melanoma.

Ten studies involving 41,703 patients who underwent total body photography due to a high risk of developing melanoma were included. Among 6203 lesions biopsided, melanoma in situ was diagnosed in 5.1% and invasive melanoma was diagnosed in 3.0%. The number needed to biopsy among these studies varied from 2.33 to 19.6, with a combined average of 8.6. The naevus:melanoma ratio ranged from 1.3 to 18.6, with a combined average of 7.6; the melanoma in situ:melanoma ratio ranged from 1.0 to 3.5, with a combined average of 1.7. The number needed to biopsy was negatively correlated with the melanoma in situ:melanoma ratio.

According to the authors, this is the first known systematic review to determine the diagnostic accuracy of total body photography for melanoma and demonstrates an acceptable number needed to biopsy for patients at high risk of melanoma. Further prospective controlled studies examining the use of total body photography are needed to establish the potential benefit of total body photography for accurate melanoma diagnosis.

Br J Dermatol. 2020 Dec 28

To ban or not to ban tanning bed use for minors: A cost-effectiveness analysis from multiple US perspectives for invasive melanoma

A ban on the use of tanning beds by minors aged 14-17 years in the United States could prevent more than 15,000 cases of melanoma and be more cost effective than other, well-established public health interventions, according to a microsimulation of the virtual life course of 14-17-year-olds. Such a ban remained cost effective after conducting extensive sensitivity analyses on the costs of inspections, noncompliance with a ban, and the risk of developing melanoma in those who have used tanning beds.

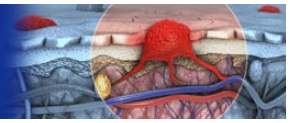
Compared with no ban, such an intervention could save over $US205 million in lifetime health care costs among the 17.1 million young people (based on the 2010 Census population) who would be affected.

The 15,102 melanoma cases and 3299 recurrences prevented would save $US12 per minor after adjusting for societal costs, including lost productivity, formal and informal health care, economic losses to the tanning bed industry, and the need for monitoring.

Analysis of quality-adjusted life-years revealed an improvement of 0.0002 QALYs per teenager for a ban, based on an overall cost of almost $US24.9 per QALY, compared with no ban, making it more cost effective than many well-established public health interventions such as processed meats taxation ($US270/QALY), smoking education campaign ($US1337/QALY), cervical cancer screening ($US2166/QALY), breast cancer screening ($US29,284/QALY) and lung cancer screening ($US49,200-$96,700/QALY).

Among the several factors included in the microsimulation were the odds ratio of developing melanoma from exposure to tanning beds before age 25 (1.35), melanoma stage at presentation, risk of recurrence, and the cost of four annual inspections for each of the US's more than 13,000 tanning salons.

Cancer. 2021 Apr 12



News in Brief

Cutaneous toxicities in patients with melanoma receiving checkpoint inhibitor therapy

These authors reviewed the retrospective records of 692 adults with melanoma from a single large specialist tertiary referral centre in the UK who had been treated with checkpoint inhibitor therapy over a 12-year period. Cutaneous toxicity occurred in 24% of the patients but was generally manageable, with <5% of patients needing to discontinue their treatment.

Clin Exp Dermatol 2021;46:338–41

Clinical profile of cutaneous adverse events of immune checkpoint inhibitors in a single tertiary centre

In this retrospective analysis, 1711 Korean patients treated with PD-1/PD-L1 inhibitors were examined for cutaneous adverse events. Forty-seven patients (2.75%) were found to have a cutaneous adverse event, most frequently pruritic eruption (n=15). Patients undergoing treatment for melanoma were more likely to have cutaneous adverse event compared to patients treated for other cancers. Patients who developed acneiform eruptions were younger compared with those who developed other eruptions. Urticarial eruptions occurred earlier in the treatment course while keratoacanthomas developed later in the treatment course.

J Dermatol. 2021 Apr 20

A systematic review and meta-analysis of prognostic outcomes in cutaneous squamous cell carcinoma with and without perineural invasion

This systematic review and meta-analysis of prognostic outcomes in patients with perineural invasion of cutaneous squamous cell carcinoma (SCC) included 55 studies. Compared to SCC patients without perineural invasion, those with perineural invasion were more likely to be immunosuppressed (OR 1.65; P=0.031) and were at higher risk for nodal metastasis (RR 3.98; P<0.00001), distant metastasis (RR 5.34; P<0.00001), and local recurrence (RR 3.14; P=0.0003), but not disease-specific mortality (RR 2.27; P=0.21). Patients who had nerve size ≥0.1 mm had a higher risk of disease-specific mortality (RR 6.607; P=0.003) and nodal metastasis (RR 5.488; P<0.001) compared to those with nerve size <0.1 mm.

AAD Virtual Meeting Experience Poster ID: 26129

United States burden of melanoma and non-melanoma skin cancer from 1990 to 2019

Data from the Global Burden of Disease database 2019 were used to establish that between 1990 and 2019, the incidence of melanoma in the US was 17.0 per 100,000 persons, while the disability–adjusted life years was 64.8 per 100,000 and the mortality from melanoma was 2.2 per 100,000. The corresponding data for squamous cell carcinoma were 262, 26.6, and 0.8 per 100,000, respectively, and for basal cell carcinoma were 525, 0.2, and 0 per 100,000, respectively. Although the prevalence of skin cancer has increased in the US since 1990, the mortality rate has remained stable. Women had lower rates of diagnosis and mortality from skin cancer than men. Melanoma incidence and prevalence were higher in the northern half of the United States than in the southern half.

J Am Acad Dermatol. 2021 Apr 20:S0190-9622(21)00755-6

COVID-19 Resources

The Australasian College of Dermatologists
Clinical Oncology Society of Australia
Cancer Australia
European Academy of Dermatology and Venereology
American Academy of Dermatology
European Society of Medical Oncology
American Society of Clinical Oncology

Conferences, Workshops and CPD

Please click on the links below for upcoming local and international melanoma meetings, workshops and CPD.

Australasian Melanoma Conference AMC2021
The Australasian College of Dermatologists - Events
DermNet New Zealand - Conferences
COSA - Events
MOGA - Events
COMS - Conferences and Meetings on Dermatology

Research Review Publications

Melanoma Research Review
with Professor Michael Henderson and Peter Hersey
https://tinyurl.com/y95oloy7

Skin Cancer Research Review
with Dr David Simpson
https://tinyurl.com/y9v4htzj

Dermatology Research Review
with Dr Warren Weightman and Clinical Assoc Prof Saxon D Smith
https://tinyurl.com/y7b6m4e3

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