15792

β3-Tubulin knockdown impairs microtubule dynamics, induces cell cycle arrest, and decreases the spontaneous release of microvesicles in human skin malignant melanoma cells (A375)

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Background: Microvesicles (MVs), ranging in size from 100 nm to 1000 nm, play an important role in carcinogenesis by promoting angiogenesis and tumor metastasis, interfering with anti-tumor immunity, and inducing multidrug resistance. The release of MVs requires structural changes in microfilaments, intermediate filaments, and microtubules. Class III β-tubulin (β3-tubulin), one of the 7 β-tubulin isotypes, is a microtubule component involved in malignant transformation and cancer development. Herein, we characterize the effects of β3-tubulin knockdown on microtubule dynamics, cell cycle regulation, and MV formation in human melanoma cells.

Methods: Human malignant melanoma cells (A375; ATCC) were cultured following manufacturer's recommendations. Using a lipofectamine RNAiMAX (Thermo Fisher Scientific) protocol, A375 were transfected with either β3-tubulin siRNA (Santa Cruz Biotechnology) or FlexiTube Lamin A/C nontargeting siRNA (Thermo Fisher Scientific). Western blot analysis, RNA isolation, immunofluorescent microscopy, and MV purification were performed 48 hours after transfection. Cell cycle analysis was conducted 24 and 48 hours post-transfection.

Results: The A375 cells were found to constitutively express β3-tubulin mRNA and protein. Knockdown of β3-tubulin in A375 cells impaired microtubule dynamicity, induced cell cycle arrest, activated apoptosis signaling pathways, and inhibited MV release.

Conclusions: Taken together, the data suggest that β3-tubulin knockdown interferes with microtubule dynamics, cell-cycle regulation, and MV release in human melanoma cells. By understanding the significance of β3-tubulin in carcinogenesis, the dermatologist will gain diagnostic, prognostic, and therapeutic insights essential for the management of melanoma patients.

Commercial disclosure: None identified.

15800

Assessment of the accessibility and content of dermatology fellowship websites

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Background: With an increasing interest in pursuing post-residency fellowships, websites can be effective tools for recruiting applicants. Since dermatology applicants frequently use internet resources to evaluate and make informed decisions about programs, we assessed the accessibility and content availability of dermatology fellowship websites.

Design: Qualitative study.

Methods: A list of accredited dermatopathology, Mohs micrographic surgery (MMS), and pediatric dermatology fellowship websites was created utilizing the Accreditation Council For Graduate Medical Education and American Board of Dermatology Approved Pediatric Dermatology Fellowship directory. Accessibility was evaluated by 'Google searching' the program. Each website's program overview, applying/recruitment, and education content was evaluated.

Results: 54 dermatopathology, 64 MMS, and 29 pediatric dermatology fellowships were included for analysis. More than 95% of websites were functional and identified with 1 click from Google search. Dermatopathology websites provided the most program overview content (52%) compared with MMS (40%) and pediatric dermatology (49%) websites. Dermatopathology websites also provided the most applying/recruitment content (52%) compared with MMS (26%) and pediatric dermatology (29%) websites. Pediatric dermatology websites provided the most educational content (49%) compared with dermatopathology (48%) and MMS (30%) websites. On average, dermatopathology, MMS, and pediatric dermatology websites provided 55%, 40%, and 50% respectively of the evaluated information, but no significant differences among fellowship types with websites containing superior amount (>70%) of content were observed.

Conclusions: There remains a gap in information availability for dermatology fellowship applicants. Updating programs' websites may improve applicant recruitment both quantitatively and qualitatively, which could be the subject of future research.

Commercial disclosure: None identified.

15798

Treatment of recalcitrant viral warts using a 1064 nm Nd:YAG laser

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Background: Viral warts are benign proliferations of epithelial cells caused by infection by human papilloma virus (HPV) types 1, 2, 4, and 57. The best approach to treatment-refractory warts is unclear. There is a variable treatment modalities regarding the therapies of recalcitrant warts, Laser therapy is considered a promising treatment method for recalcitrant warts. Different types of lasers have been used for treatment of warts. long-pulsed Nd:YAG laser is considered a good treatment modality in resistant plantar warts.

Objective: We evaluated the clinical improvement of 13 patients with a recalcitrant viral wart who were treated with a long-pulsed ND:YAG laser

Methods: We defined recalcitrant warts as those not responding to other treatments and being present for longer than 6 months. This study included 13 patients with single or multiple recalcitrant viral warts that persisted for >6 months. 13 patients with 206 recalcitrant plantar warts who were treated by 1064 nm Nd:YAG laser. The diagnosis of plantar warts was made by clinical examination.

Results: 3 patients (23%) were completely cleared of their warts with long-pulsed Nd:YAG laser. 205 recalcitrant viral warts were decreased to 35 lesions; total clearance rate are 83%. There were no significant adverse effect.

Conclusions: Nd:YAG laser emits microwaves with a wavelength of 1064 nm. This is the ideal wavelength to destroy the HPV virus. Long-pulsed Nd:YAG laser for to treat recalcitrant viral wart is safety and efficiency therapeutic modality.

Commercial disclosure: None identified.

15807

Efficacy of tildrakizumab in patients with moderate to severe psoriasis according to disease duration: Pooled analysis from reSURFACE 1 and reSURFACE 2 phase 3 trials at week 28

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Background: Tildrakizumab (TIL) is an anti−IL-23p19 monoclonal antibody, approved for the treatment of plaque psoriasis, that has shown to be efficacious and safe in the long-term.

Objective: To report week 28 pooled efficacy data according to disease duration from two phase 3 trials: reSURFACE 1/2 (NCT01722331/NCT01729754).

Methods: Post hoc pooled analysis of patients with moderate to severe plaque psoriasis according to disease duration (≤5/>5−10/>10 years) from reSURFACE 1 and reSURFACE 2 trials. Efficacy end points: proportion of patients achieving PASI75, PASI90, and absolute PASI 5−10 years: 320 patients; >10 years: 1120 patients). In patients with a disease duration ≤5 years, PASI75 response rates were 81.2%/83.3%/60.5%; PASI90 response rates 61.5%/67.6%/46.5%; and absolute PASI 5−10 years, PASI75 response rates were 76.4%/71.2%/45.3%; PASI90 response rates 53.8%/53.3%/24.5%; and absolute PASI 10 years, PASI75 response rates were 72.6%/74.9%/54.4%; PASI90 response rates 48.2%/54.7%/26.9%; and absolute PASI <3 response rates 60.8%/66.2%/39.4% (TIL 100 mg/TIL 200 mg/ETN 50 mg).

Conclusions: At wk 28, there was a high and sustained efficacy response in patients treated with TIL. Interestingly, patients treated with TIL who had short disease duration had higher efficacy rates, suggesting that treating as early as possible may result in optimal clinical benefits.

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