


Table 1 Sentinel lymph node biopsy and diagnosis of melanoma in referral centers in Italy

Italian centers	Overall melanoma diagnosis				Sentinel lymph node biopsy			
	2019	2020	%	Period	2019	2020	%	Period
Genova ^a	138	87	-37	12 months	36	18	-50	12 months
IMI group N/S ³	3,156	2,386	-14.6 (N) -33.9 (S)	3 months	376	400	+4.2 (N) +8.2 (S)	3 months
Milan ¹	4	8	+50	2 months	N.A.	N.A.	N.A.	2 months
Rome ^b	141	62	-56	2 months	N.A.	N.A.	N.A.	2 months
Reggio Emilia ^b	115	28	-76	2 months	N.A.	N.A.	N.A.	2 months
Pavia ²	24	6	-75	3 months	N.A.	N.A.	N.A.	3 months
Padova ⁵	66	64	-3	3 months	31	22	-29	3 months

N.A., data not available; N/S, North/Center-South Italy.

^aThis study.

^bData from the same study, by Longo et al.⁴

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Comment on “Androgens and women: COVID-19 outcomes in women with acne vulgaris, polycystic ovarian syndrome, and hirsutism”

Dear Editor,

We read with great interest a study by Yale et al.¹ published in the *International Journal of Dermatology*. The authors studied the relation between hyper androgenic women, such as women with polycystic ovary syndrome (PCOS), nodulocystic acne, or hirsutism, and COVID-19. The authors noted that hospitalization rates among COVID-19-positive women of this cohort varied from 4.5 to 8%, with no significant increase in mortality rates compared to 11.4–11.7% in those without these conditions. Furthermore, there were no significant associations between the studied women on therapeutics and the rate of COVID-19 infection or hospitalization. These therapeutics included spironolactone, estradiol, and metformin.¹

Female hyperandrogenism is characterized by elevated androgen levels and is often a result of PCOS, which is one of the most common endocrine disorders in women, affecting 8–16% of all women.² Patients with PCOS are at risk to develop resistant acne, hirsutism, and female pattern hair loss, in addition to metabolic syndrome. Unlike in the study by Yale et al.,¹ authors from the United Kingdom noted that PCOS women had a 28% increased risk of suspected/confirmed COVID-19 compared to non-PCOS women.² Interestingly, isotretinoin solely may be beneficial to patients with PCOS and acne who are not candidate for oral contraceptive pills.³ Feily et al.⁴ noted that low-dose isotretinoin (0.5 mg/kg/day for 15–20 weeks) in PCOS patients with moderate-to-severe nodulocystic acne resulted in significant decreases in levels of serum total testosterone, prolactin, and dihydrotestosterone. The latter promotes the

expression of transmembrane serine protease 2 (TMPRSS2). Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) uses TMPRSS2 and angiotensin-converting enzyme-2 (ACE2), for priming and cellular invasion, respectively.⁵ Interestingly, isotretinoin is a strong downregulator of ACE2 receptors, a papain-like protease (PLpro) inhibitor, a protein encoded by SARS-CoV-2 genes, and immunomodulator.⁶ As noted in previous studies, isotretinoin does not increase the risk of acquiring SARS-CoV-2⁶ and should be used in a low dose with proper care of the nasal mucosa.^{7,8} On the other hand, in the study by Yale et al.¹, there were no clear data on the clinical symptoms for which their patients were hospitalized. Recently, Cadegiani et al.⁹ noted a significant high frequency of several common clinical symptoms of COVID-19, such as conjunctival hyperemia, upper back pain, hyporexia/anorexia, weakness, fatigue, dry cough, ageusia, anosmia, and low-grade fever, in hyperandrogenic women compared to non-hyperandrogenic counterparts.

To summarize, PCOS may represent a distinct subgroup of women at higher than average risk of adverse COVID-19-related outcomes.² COVID-19 PCOS patients are at risk to develop mild-to-moderate symptoms. Awareness of these symptoms could improve the identification of a potentially high-risk population for COVID-19.⁹ Despite its lower incidence in hyperandrogenic women, serious symptoms that warrant hospitalization should be taken into consideration. In addition to the results found by Yale et al.,¹ we suggest isotretinoin, in low dose, as a potential antiandrogenic line with tolerable adverse effects, to be considered for women with cutaneous manifestations of hyperandrogenic background in the era of COVID-19 but yet not a prevention or a treatment for severe COVID-19.

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The impact of the COVID-19 pandemic on US dermatology resident training and wellness

Dear Editor,

The COVID-19 pandemic has impacted dermatology resident education, with potential downstream effects on resident skills and well-being. Residents in many specialties have been pulled for clinical duties outside of their training programs to care for patients with COVID-19 and to fill gaps in patient care caused by the pandemic.^{1,2} We examine how the COVID-19 pandemic has affected the wellness, education, clinical responsibilities, and safety of the United States' dermatology residents.

An anonymous, 26-question questionnaire was emailed to all 144 dermatology residency programs in the United States. The questionnaire contained questions about demographic factors and COVID-19-related changes to clinical responsibilities, wellness, and career plans. Burnout, depression, and anxiety were assessed using the Maslach Burnout Inventory two-item survey (MBI-2),³ the Patient Health Questionnaire 2 (PHQ-2),⁴ and the Generalized Anxiety Disorder 2-item screen (GAD-2),⁵ respectively. The study was reviewed by the University of Washington Human Subjects Division (Seattle, WA) and determined to be exempt from review by the institutional review board (STUDY00010667).

Of 144 active United States' dermatology residencies, 52 (36%) confirmed distribution of the survey to 597 residents. Of