

2018
28-30 JUNE
VIENNA

MASCC/ISOO
ANNUAL MEETING
SUPPORTIVE CARE IN CANCER



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Nasal Colonization with *Staphylococcus Aureus* Before Radiotherapy Predicts Radiation Dermatitis

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Montefiore



Albert Einstein College of Medicine

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Faculty Disclosure

We have nothing to disclose.



Background:

- Radiation dermatitis (RD) is a common adverse event of radiation therapy, with an incidence rate of up to 95%
- There is no gold standard approach in the prevention and management of RD



Background:

- Risks for RD are multi-factorial
- Microbial colonization has a role in inflammatory skin disorders that are similar to RD
- *Staphylococcus aureus* can facilitate skin barrier defects and drive inflammation
- Little is known regarding the baseline incidence of microbial colonization prior to radiation therapy



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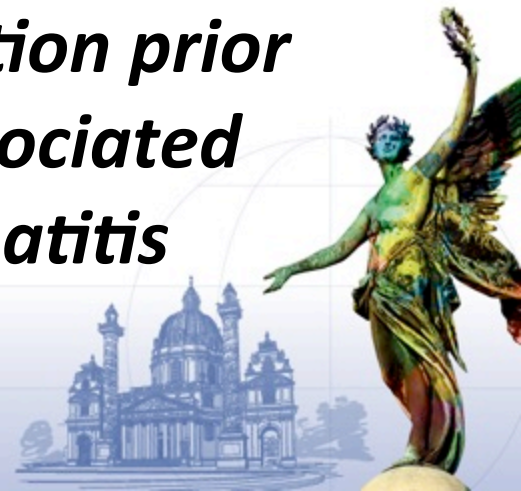
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Objectives:

1. Characterize the incidence of bacterial colonization in patients undergoing radiation therapy
2. Examine the association between radiation dermatitis severity and bacterial colonization

We hypothesize that microbial colonization prior to initiation of radiation therapy is associated with development of radiation dermatitis



Methods:

- Patients with cancers of the head & neck, breast, or anus underwent bacterial culture from 2 sites at 2 time points

Montefiore	Nares	Skin in irradiated region
Prior to RT initiation	X	X
Final week of RT	X	X

- Patients were evaluated weekly during treatment and dermatitis was graded using CTCAE version 4.03

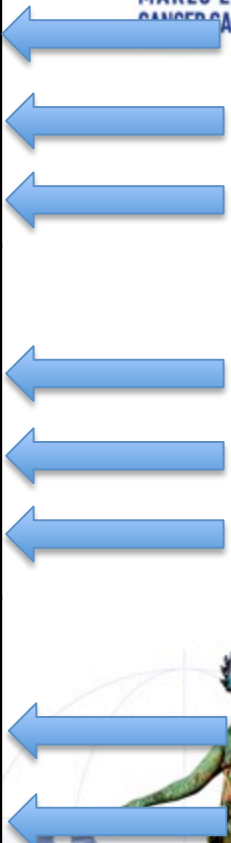


Results:

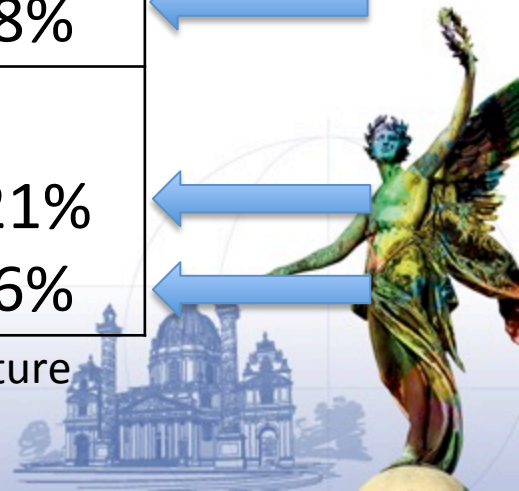


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Total patients	n =83	
Cancer:	n	%
Breast	41	49%
Head & neck	37	45%
Anal	5	6%
Dermatitis grade		
Grade 1	49	59%
Grade 2	27	33%
Grade 3	7	8%
Baseline culture SA (+)		
Nares	17	21%
Radiation skin	5*	6%



*all 5 subjects with a (+) skin culture also had a (+) nares culture

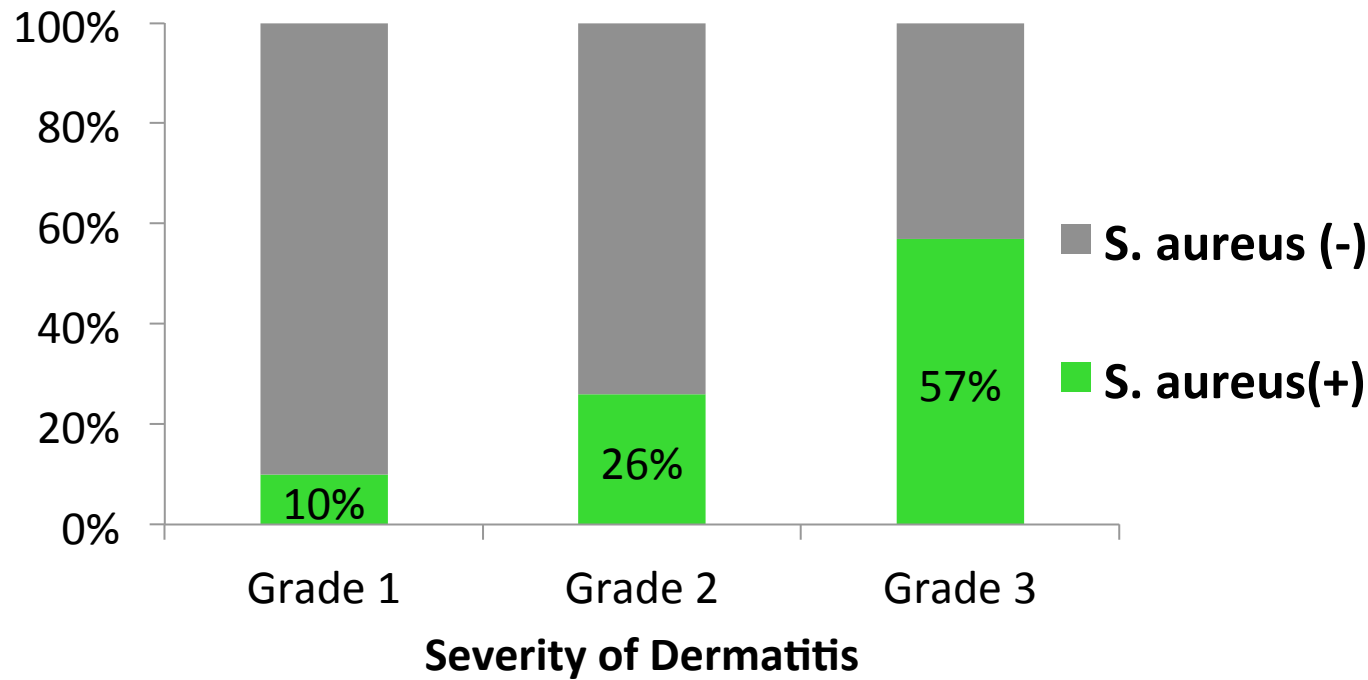


Results



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Radiation Dermatitis Severity and Nares Bacterial Colonization Status at Baseline



- Positive nares culture for *Staphylococcus aureus* at baseline was associated with increased risk of grade 2-3 dermatitis

(65% vs. 34%, OR = 3.6, p=0.025)



Conclusions:

- Bacterial colonization with *Staphylococcal aureus* in the nares prior to initiation of radiotherapy is a risk factor for development of high-grade radiation dermatitis
- The role of antimicrobial therapy prior to initiation of radiotherapy ought to be explored
- Future directions

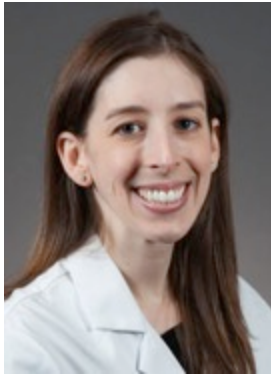


Thank you!



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