
LOYOLA
UNIVERSITY
CHICAGO
2022 Junior Scientist
of the Year
Presented to
BRYAN C. MOUNCE, Ph.D.
Department of
Microbiology and Immunology
In Grateful Recognition of Your Dedicated
Service to Research and Education
By
Loyola University Chicago
Stritch School of Medicine


log10 viral titer (PFU/mL)
CVB3
Untreated
DFMO
Passage in DFMO
0
24
50
65
80
LUC SERVICE DESK *5611


Mounce
Virology
Bridie Hulsebosch, MS
Mason Firpo
Natalie LoMascolo, MS
Yazmin Cruz-Pulido
Maria del Mar Villanueva Guzman
Andrea Chu
Vince Mastrodomenico, MS
Courtney Dial, MS
Tom Kicmal, MS
Patrick Tate
Stephanie Beaucourt, MS
Jeremy Esin, MS
Marion Graham, MS
Zach Sandler
Charlie Yarwood
Oreoluwa Omoba, MS
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LOYOLA
UNIVERSITY
CHICAGO
2022 Senior Scientist
of the Year
Presented to
PETER M. KEKENES-HUSKEY, Ph.D.
Department of
Cell and Molecular Physiology
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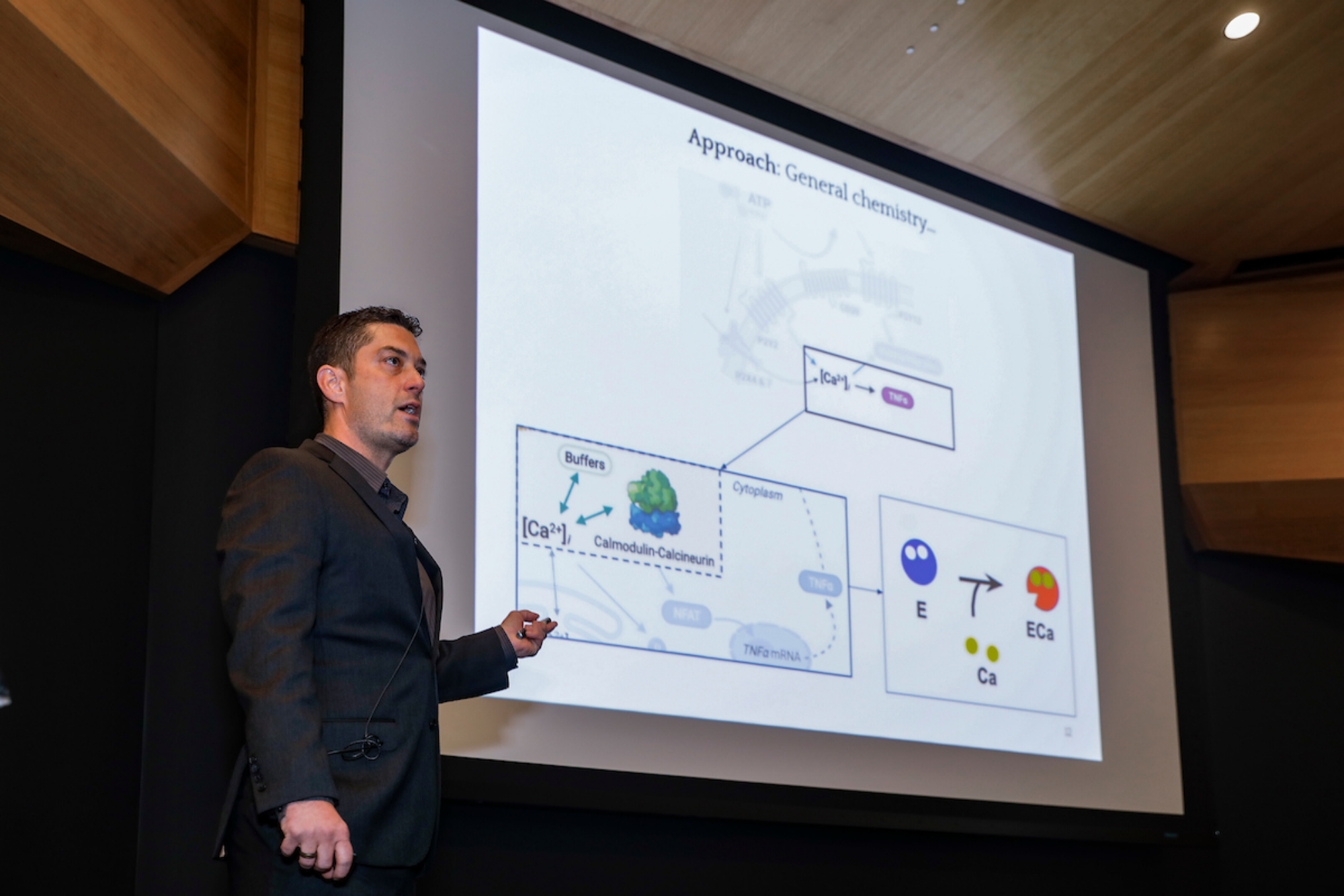
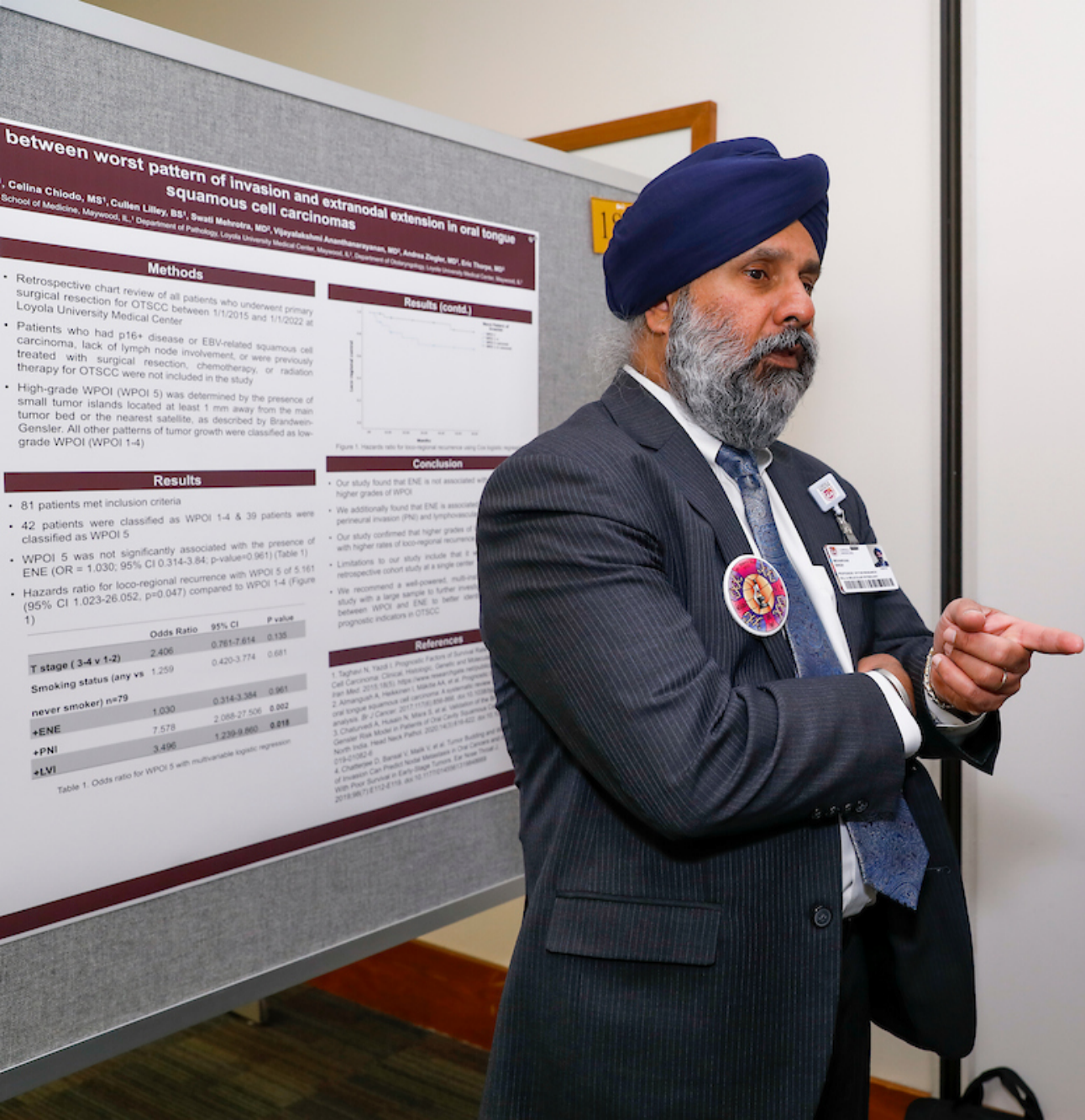
Loyola University Chicago
Stritch School of Medicine


XSEDE
American Heart Association.


Approach: General chemistry
ATP
[Ca2+]i
TNFa
Buffers
[Ca2+]i
Calmodulin-Calcineurin
Cytoplasm
TNFa
NFAT
TNFa mRNA
E
ECa
Ca


between worst pattern of invasion and extranodal extension in oral tongue squamous cell carcinomas

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Methods

- Retrospective chart review of all patients who underwent primary surgical resection for OTSCC between 1/1/2015 and 1/1/2022 at Loyola University Medical Center
- Patients who had p16+ disease or EBV-related squamous cell carcinoma, lack of lymph node involvement, or were previously treated with surgical resection, chemotherapy, or radiation therapy for OTSCC were not included in the study
- High-grade WPOI (WPOI 5) was determined by the presence of small tumor islands located at least 1 mm away from the main tumor bed or the nearest satellite, as described by Brandwein-Gensler. All other patterns of tumor growth were classified as low-grade WPOI (WPOI 1-4)

Results

- 81 patients met inclusion criteria
- 42 patients were classified as WPOI 1-4 & 39 patients were classified as WPOI 5
- WPOI 5 was not significantly associated with the presence of ENE (OR = 1.030; 95% CI 0.314-3.84; p-value=0.961) (Table 1)
- Hazards ratio for loco-regional recurrence with WPOI 5 of 5.161 (95% CI 1.023-26.052, p=0.047) compared to WPOI 1-4 (Figure 1)

	Odds Ratio	95% CI	P value
T stage (3-4 v 1-2)	2.406	0.761-7.614	0.135
Smoking status (any vs never smoker) n=79	1.259	0.420-3.774	0.681
+ENE	1.030	0.314-3.384	0.961
+PNI	7.578	2.068-27.506	0.002
+LVI	3.496	1.239-9.860	0.018

Table 1. Odds ratio for WPOI 5 with multivariable logistic regression

Results (contd.)

Figure 1. Hazards ratio for loco-regional recurrence using Cox logistic regression

Conclusion

- Our study found that ENE is not associated with higher grades of WPOI
- We additionally found that ENE is associated with perineural invasion (PNI) and lymphovascular invasion (LVI)
- Our study confirmed that higher grades of WPOI are associated with higher rates of loco-regional recurrence
- Limitations to our study include that it is a retrospective cohort study at a single center
- We recommend a well-powered, multi-institutional study with a large sample to further investigate the relationship between WPOI and ENE to better identify prognostic indicators in OTSCC

References

1. Taghavi N, Yazdi I. Prognostic Factors of Survival Rate in Oral Squamous Cell Carcinoma: Clinical, Histologic, Genetic and Molecular Factors. Front Med. 2015;1(63). https://www.frontiersin.org/article/10.3389/fmed.2015.00063
2. Almangush A, Heikkinen I, Mäkitie AA, et al. Prognostic biomarkers in oral tongue squamous cell carcinoma: A systematic review and meta-analysis. Br J Cancer. 2017;117(6):856-866. doi:10.1038/bjc.2017.256
3. Chatterjee D, Bansal V, Malik V, et al. Validation of the Brandwein-Gensler Risk Model in Patients of Oral Cavity Squamous Cell Carcinoma from North India. Head Neck Pathol. 2020;14(3):619-622. doi:10.1007/s12105-019-01082-6
4. Chatterjee D, Bansal V, Malik V, et al. Tumor Budding and Worst Pattern of Invasion Can Predict Nodal Metastasis in Oral Cancers and Are Associated With Poor Survival in Early-Stage Tumors. Ear Nose Throat J. 2018;96(7):E12-E19. doi:10.1177/014556131809600


42ND ANNUAL
ST. ALBERT'S DAY

42ND ANNUAL ST. ALBERT'S DAY

Saint Albertus Magnus was also known as Albert the Great, Sankt Albert der Grosse, Albert of Cologne, or Albert of Lauingen. Dominican bishop and philosopher best known as a teacher of St. Thomas Aquinas and as a proponent of Aristotelianism at the University of Paris. He established the study of nature as a legitimate science within the Christian tradition. By papal decree in 1941, he was declared the patron saint of all who cultivate the natural sciences. He was the most prolific writer of his century and was the only scholar of his age to be called "the Great"; this title was used even before his death.

He was among the first and greatest of the natural scientists, gaining a reputation for expertise in biology, chemistry, physics, astronomy, geography, m[illegible]physics, and mathematics. His life and writings emphasized the importance experi[illegible]ntation and investigation.

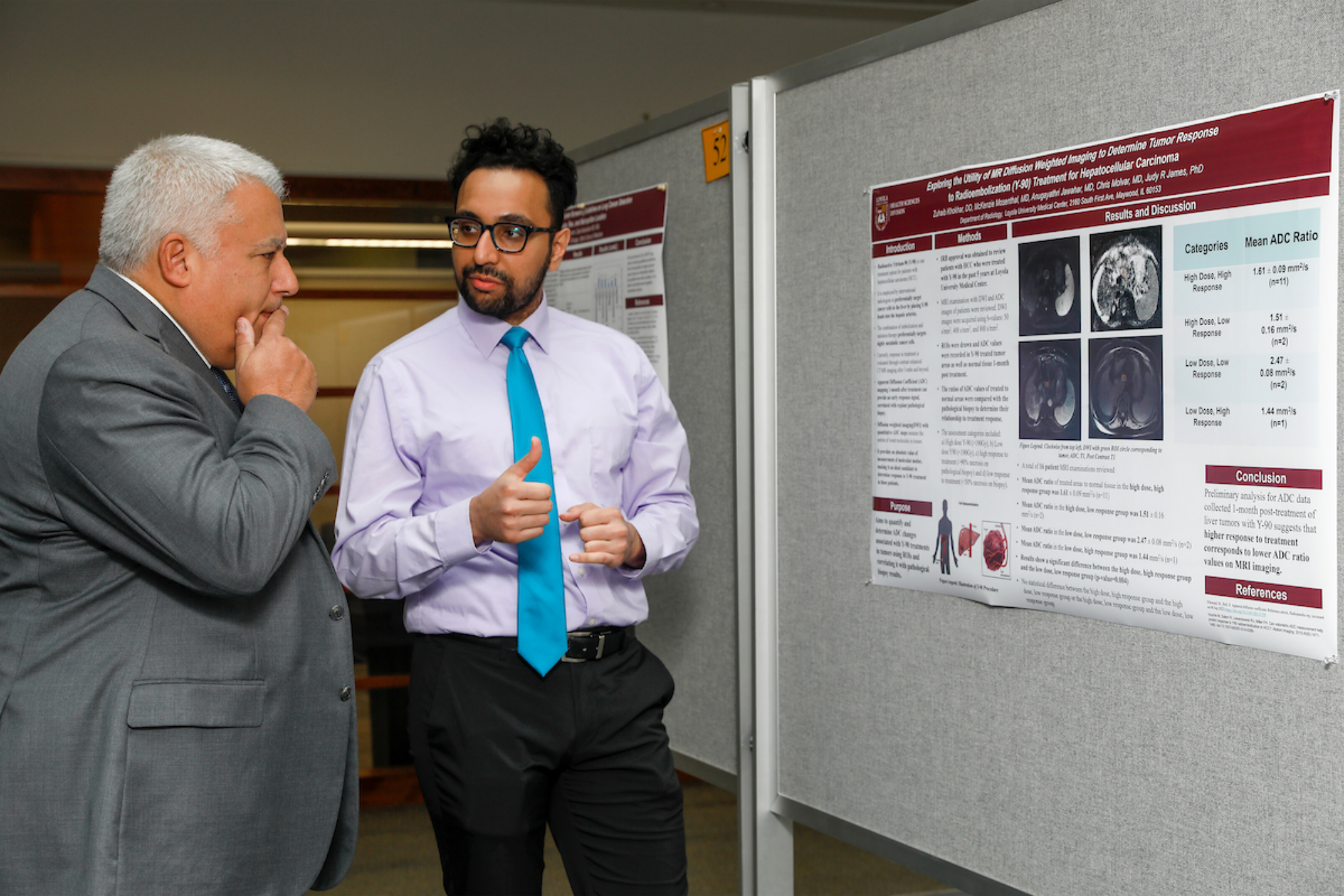
[illegible]ola's a[illegible]ual St. Albert's Day embodies Saint Albert's spirit by celebrating [illegible]urch[illegible]d the sharing of scientific knowledge with others.

LOYOLA UNIVERSITY CHICAGO
1870
AD · MAJOREM · DEI · GLORIAM


YOUR
SIP BACK
AND
RELAX
YETI
YETI


YETI
YOUR
KICK BACK
AND
RELAX


B
A


Exploring the Utility of MR Diffusion Weighted Imaging to Determine Tumor Response to Radioembolization (Y-90) Treatment for Hepatocellular Carcinoma
Introduction
Methods
Results and Discussion
Purpose
Conclusion
References
Categories
Mean ADC Ratio
High Dose, High Response
1.61 ± 0.09 mm²/s (n=11)
High Dose, Low Response
1.51 ± 0.16 mm²/s (n=2)
Low Dose, Low Response
2.47 ± 0.08 mm²/s (n=2)
Low Dose, High Response
1.44 mm²/s (n=1)


Toll-like receptor 9 signaling modulates IL-4 induced class switching in B cells
Background and Methods
CpG reduces Iε germline transcription
Iε reporter mouse
Iγ1 reporter mouse
CpG promotes Iγ1 germline transcription
Double reporter mouse
CpG increases Iγ1 and decreases Iε germline transcription
Ongoing Investigations
30


YETI


YETI
YETI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Lenovo


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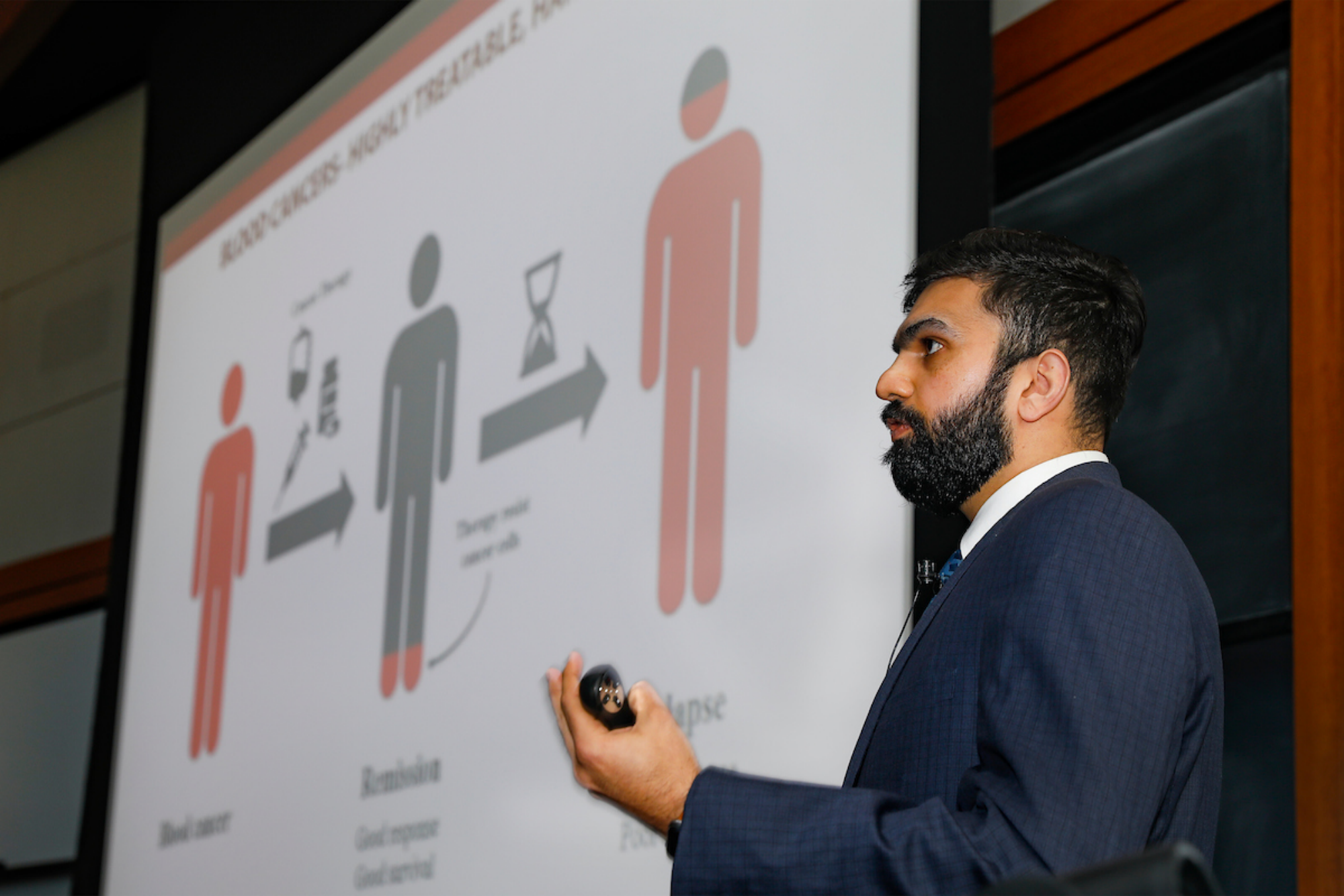
Remission
Good response
Good survival


Introduction
Objectives
Methods
Progress
We expect to have preliminary data available by Dec 2022.


Known transcription factor binding sites on Iε and Iγ1
pSTAT6
ATF2
Iγ1
-129
PpuB
JunD
pSTAT6
Iε
C/EBPβ
Upstream promoter regions
Mao et al. 2001
CpG upregulates pATF2 and C/EBPβ
30 mins
4 hrs
Overnight
pATF2
C/EBPβ
GAPDH
CpG does not alter pSTAT6 levels
30 mins
4 hrs
Overnight
pSTAT6