

Assessment and Improvement of Depression Screening Rates in the AdventHealth Orlando Internal Medicine Outpatient Clinic with the Application of Patient Health Questionnaires

Bo Deng MD, PhD, Xia Zhou MD, PhD, Xuan Guan MD, PhD, Rima Shobar MD, MS, John Taylor, MD, Karen Echeverria-Beltran MD, Manoucher Manoucheri MD.
AdventHealth Internal Medicine Residency, Orlando, FL

Background

- ❖ Depression: a leading cause of disability
- ❖ US adults age over 18 with depression in any 2wk period: 18.5% in 2019
- ❖ Mortality of depression (2019):
 - Suicide deaths: 47,500
 - Cause of death rank: 10
 - Suicidal rate: increased 33% (1999-2019)
- ❖ The totality of evidence supports the benefits of screening in pregnant, postpartum and general adult population, particularly in the presence of additional treatment support
 - 71 studies in 91 publications.
 - 15 trials
- ❖ USPSTF recommends yearly screening for depression in the general adult population, including pregnant and postpartum women from 2009 (Grade B)
- ❖ National screening rates: 1.4% between 2005-2015; 3% in 2015.

Objectives

- ❖ Assess the effectiveness of the existing depression screening program in our clinic and implement changes to increase the effectiveness of screening.
- ❖ Improve the depression screening rate to 60% after 1 yr and 80% after 2 yrs.

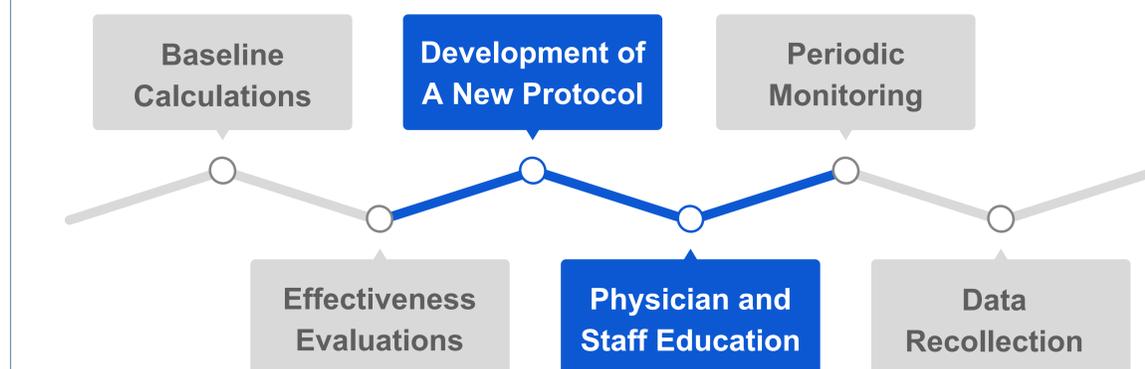
Acknowledgement

- ❖ All faculty and resident physicians & medical staff in our clinic

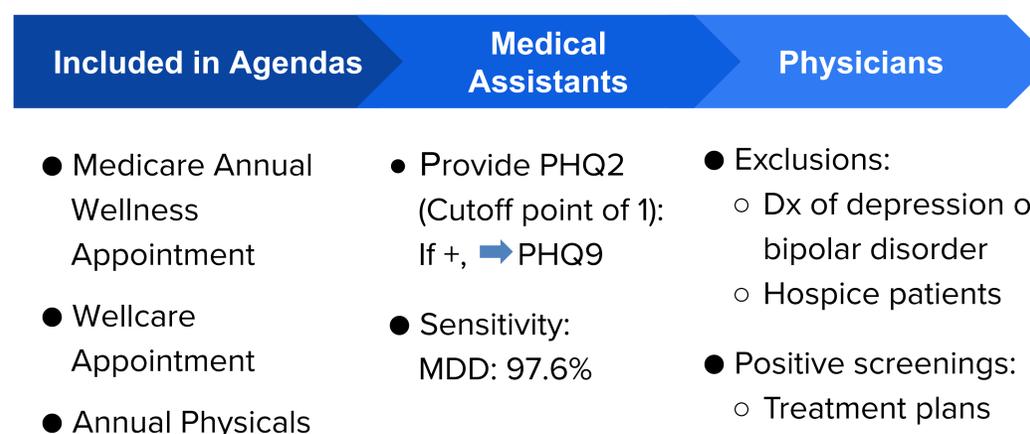
Contact Information

- ❖ Bo Deng, MD, PhD.
<bo.deng.md@adventhealth.com>

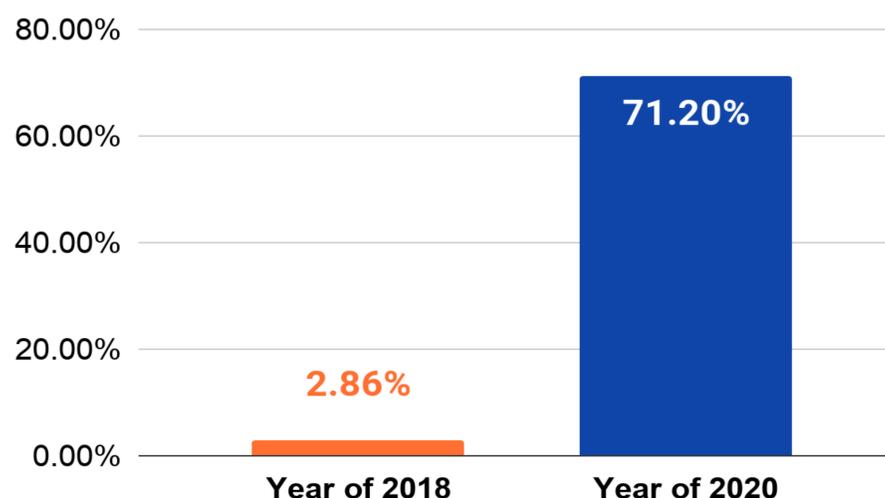
Quality Improvement Process



New Depression Screening Protocol



Depression Screening Rates in Our Clinic



Conclusions

- ❖ The baseline screening rate in our clinic was low and comparable to the national average.
- ❖ By implementing a new depression screening program to increase the effectiveness of screening, we increased our depression screening rate by from 2.86% to 71.2%

Significance

- ❖ Dramatically increased the chance of our clinical patients with depression symptoms to receive treatment
- ❖ Propagation of our current screening program to other similar primary care practice can potentially increase the national screening rate
- ❖ Special significance during the COVID-19 pandemic: A recent study in JAMA shows US adults depression prevalence increased by 3-fold in 2020

Reference

- <https://www.ncbi.nlm.nih.gov/books/NBK349027/>
- <https://jamanetwork.com/journals/jama/fullarticle/2484344>
- <https://www.cdc.gov>
- Maria A, et al. Symptoms of Depression Among Adults: United States, 2019. NCHS Data Brief No. 379, September 2020
- <https://www.uspreventiveservicestaskforce.org/uspstf/document/RecommendationStatementFinal/depression-in-adults-screening>
- Ettman CK, et al. Prevalence of Depression Symptoms in US Adults Before and During the COVID-19 Pandemic. JAMA Netw Open. 2020 Sep 1;3(9):e2019686.

Mengni Guo MD¹, Anum Jalil MD¹, Jieying Liu MD¹, Ruoyu Miao MD¹, Tien Tran MD², Jian Guan MD¹

1. Internal Medicine Residency Program, AdventHealth Orlando, Orlando, FL
2. Department of Pathology, AdventHealth Orlando, Orlando, FL

INTRODUCTION

- Pulmonary sarcomatoid carcinoma (PSC) is a rare and highly aggressive subtype of non-small-cell lung cancer.
- Tongue metastasis from lung cancer is a rare condition that may occur in advanced stage of the disease.
- Rapid progression of tongue metastasis can present with subacute tongue swelling, mimicking a tongue abscess.

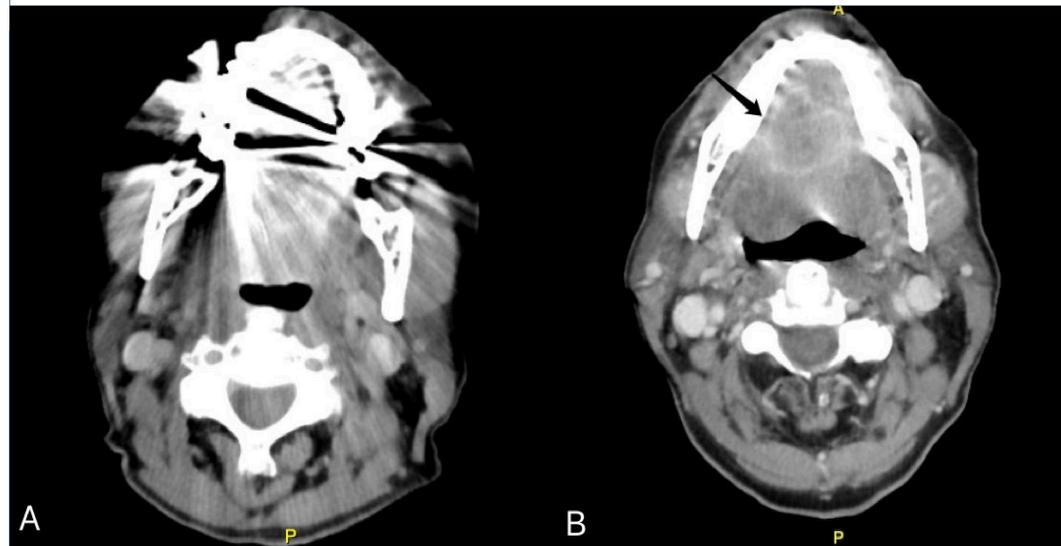
CASE PRESENTATION

- A 70-year-old female presented with a two-week-history of worsening tongue swelling, dysphagia, odynophagia, and altered mental status.
- **Pertinent history prior to admission:** Stage IV pleomorphic carcinoma (a subtype of PSC), target therapy discontinued and methylprednisolone started after tongue swelling due to concern for allergic reaction. Recent left vocal cord injection for left vocal cord paralysis.
- **Physical examination:** SpO₂ 84% on room air. Tongue and floor of mouth severely edematous, deep oral tongue firm to palpation, overlying mucosa intact.
- **Laboratory studies:** Polymorphonuclear leukocytosis with WBC 20.85 x 10³/ul.
- **Imaging studies:** CT of the neck with contrast on admission identified a 2.7 x 3.2 x 1.9 cm lesion, which was not clearly visualized in CT scan one week prior to admission.
- **Hospital course:** Given the rapid interval change, recent surgical procedure and leukocytosis, an abscess was favored, with a differential diagnostic consideration of a necrotic mass. Intubated for airway protection. Started on broad empirical antibiotics. Underwent midline partial glossectomy. Extubated after surgery with satisfactory saturation on room air and mentation back to normal.

CASE PRESENTATION

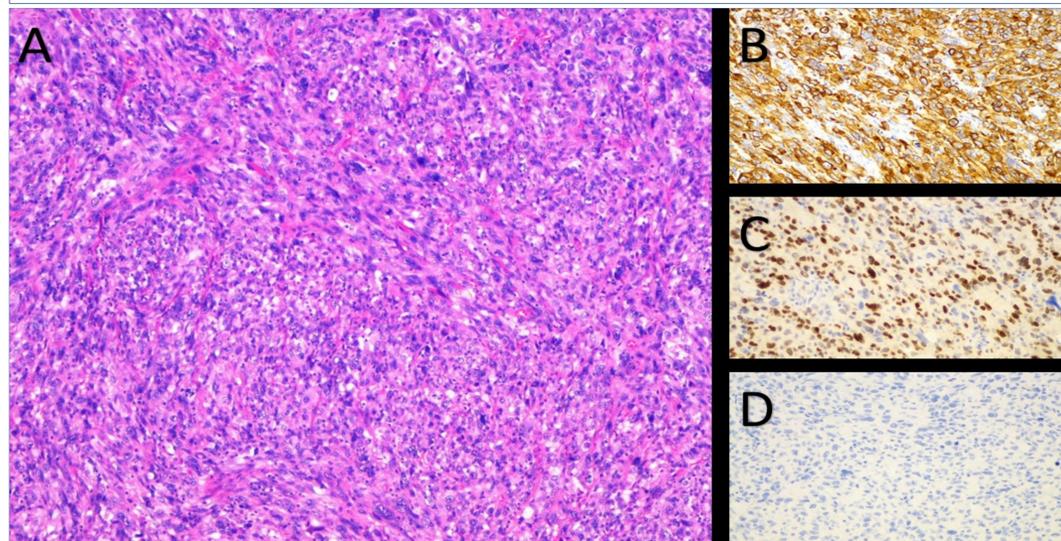
- Pathology consisted with tongue metastasis from PSC.
- Regular out-patient follow-ups with her oncologist.

IMAGING



A. CT of neck with contrast one week prior to admission
B. CT of neck with contrast on the day of admission

PATHOLOGY



Tongue mass characterized by high-grade, poorly-differentiated spindle and epithelioid malignant neoplasm (A), positive for cytokeratin AE1 / AE3 (B) and TTF-1 (C), completely negative for p40 (D).

CONCLUSION

- Although uncommon, clinicians should be cognizant of the possibility of a metastatic process to the tongue mimicking an inflammatory process.
- A high index of suspicion for metastatic disease should be maintained when tongue swelling is observed in patients with a known history of PSC.
- To the best of our knowledge, this is the first documented case of tongue metastasis by this subtype of PSC.

REFERENCES

1. Travis WD. Sarcomatoid neoplasms of the lung and pleura. Archives of Pathology and Laboratory Medicine. 2010 Nov;134(11):1645-58.
2. Zegarelli DJ, Tsukada Y, Pickren JW, Greene Jr GW. Metastatic tumor to the tongue: Report of twelve cases. Oral Surgery, Oral Medicine, Oral Pathology. 1973 Feb 1;35(2):202-11.
3. Travis WD, Brambilla E, Nicholson AG, Yatabe Y, Austin JH, Beasley MB, Chirieac LR, Dacic S, Duhig E, Flieder DB, Geisinger K. The 2015 World Health Organization classification of lung tumors: impact of genetic, clinical and radiologic advances since the 2004 classification. Journal of thoracic oncology. 2015 Sep 1;10(9):1243-60.

CONTACT INFORMATION

Mengni Guo
Email: mengni.guo.md@adventhealth.com

Quality Improvement Project

Improving the transition of care from ICU to step-down unit

Mengni Guo MD, Xuan Guan MD, Sumayyah Shah MD, Luis Isea MD, Jian Guan MD, Dwayne Gordon MD
Internal Medicine Residency Program, AdventHealth Orlando, Orlando, FL

BACKGROUND

- Timely transitioning patients from costly ICU environment to step-down unit (PCU) is a promising domain for cost-effectiveness improvement.
- An optimal flow is critical to ensure high-quality care. Engaging healthcare professionals across different clinical settings is vital to successful implementation of this strategy.
- We hypothesize improving the handover process from ICU to PCU will lead to improved transition of care.

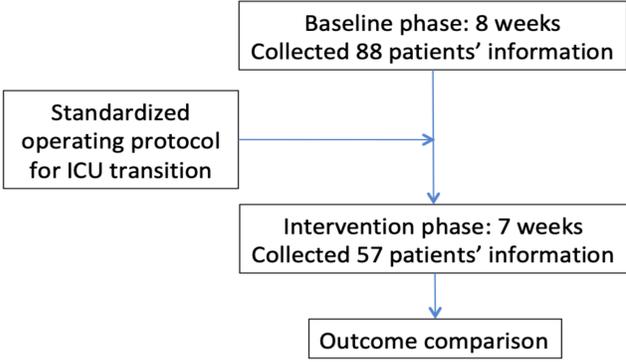
OBJECTIVE

- To provide a systematic method to transition patients from ICU to step down unit.
- To bridge gaps in communication between ICU and step down multidisciplinary teams.

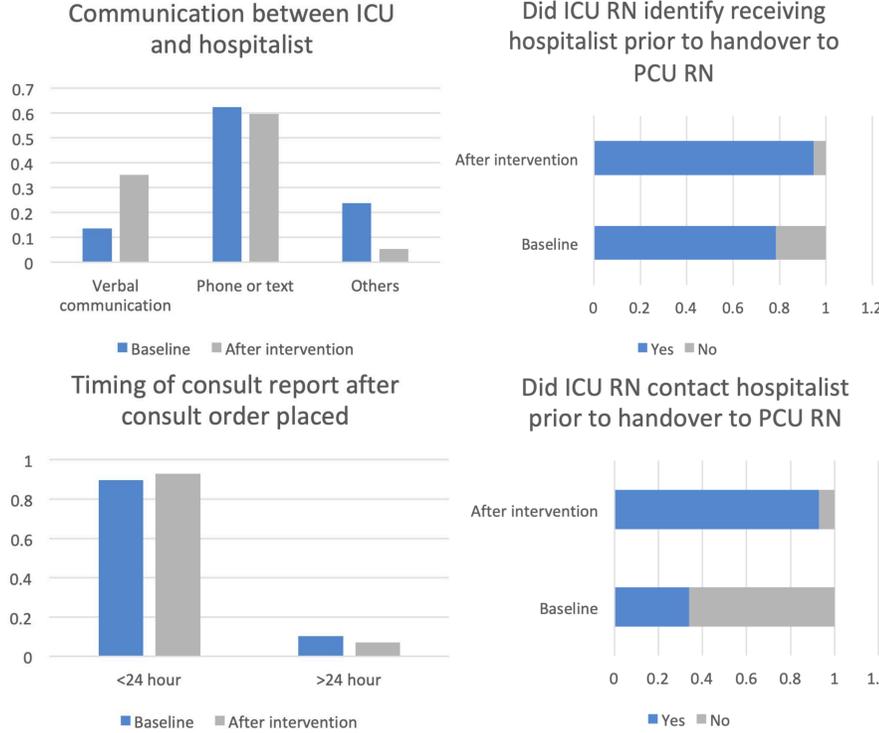
METHOD

- The study included a baseline phase of 8 weeks and an intervention phase of 7 weeks.
- A total of 145 patients were enrolled in the analysis (88 in the baseline phase, 57 in the intervention phase).
- During the intervention phase, a standardized operating protocol for ICU transition was implemented, including:
 - 1) Early identification of eligible ICU patients
 - 2) Ensure communication between:
 - Intensivists / hospitalists
 - ICU registered nurses (RNs) / PCU RNs
 - ICU RNs / hospitalists
 - 3) Adopt a health unit coordinator (HUC) driven notification system to recipient hospitalists upon transfer
- Residents rotating in medical ICU monitored ICU transfer, conducted chart review and collected pertinent data.

STUDY FLOW DIAGRAM



Outcome measurements		Baseline	Post-intervention
Communication between ICU and hospitalist	Verbal communication	12 (14%)	20 (35%)
	Phone or text	55 (62%)	34 (60%)
	Others	21 (24%)	3 (5%)
ICU RN contacted hospitalist prior to handover to PCU RN	Yes	30 (34%)	53 (93%)
	No	58 (66%)	4 (7%)
ICU RN identified hospitalist prior to handover to PCU RN	Yes	69 (78%)	54 (95%)
	No	19 (22%)	3 (5%)
Interval between consult order and first hospitalist note	<24 hours	79 (90%)	53 (93%)
	>24 hours	9 (10%)	4 (7%)



RESULT

- Improved intensivist to hospitalist communication (76% vs. 95%).
- Improved ICU RN to hospitalist communication (34% vs. 93%).
- Improved identification of hospitalists by ICU RNs prior to PCU step-down (78% vs. 95%).
- Improved care transition from ICU to step-down unit (90% vs. 93%).

CONCLUSION

- Our study suggests that a significant communication gap exists among healthcare providers including intensivists, hospitalists and RNs during patients' PCU transition process, leading to delayed care.
- By implementing a systematic workflow we demonstrated that improving patient handover process effectively closed the communication gap, with tremendous potential to reduce cost and improve quality.

CONTACT INFORMATION

Mengni Guo
Email: mengni.guo.md@adventhealth.com

Large recurrent mediastinal abscess presenting with cardiopulmonary collapse

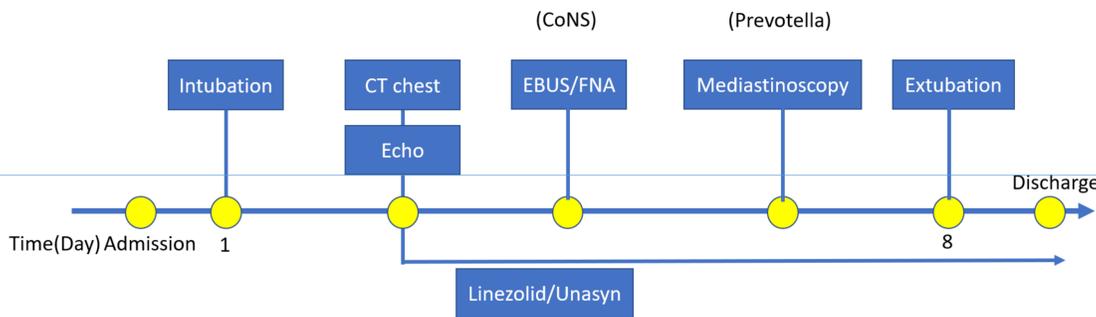
Brandon Kalivoda, MD; Alexandra Lackey, MD; Aashish Mainali, MD; Jian Guan, MD

Introduction	Case Presentation cont.	Discussion
--------------	-------------------------	------------

- Mediastinal abscesses encompass several clinical challenges due to the broad differential and potential for life-threatening complications.
- Housing the heart, esophagus, trachea and major vessels, even slight interruptions of this cavity can have devastating consequences.

Case Presentation

- **HPI:** 29-year-old female presented with sudden onset dyspnea and cough with red sputum for three days.
- **PMH:** a dental abscess treated 10 years ago, 8 years ago she had an episode of respiratory distress with a mediastinal abscess that was drained during a mediastinoscopy.
- **Initial VS:** HR 104, Temperature 99.4°F, RR 18, O2 saturation 98% on room air, BP 111/75.
- **Physical exam** well-developed female in mild respiratory distress with good oral hygiene without overt signs of an oral infection. Lung and heart auscultation: wnl
- **Lab:** WBC 11.08K but the rest of CBC/CMP : wnl
- **Hospital course:** Patient was intubated shortly after the worsening of her respiratory distress. Further workup including CT chest and Echo revealed large mediastinal mass concerning for abscess. Broad-spectrum abx were started. EBUS with FNA revealed coagulase-negative staphylococcus. Mediastinoscopy with a drain was subsequently performed. Prevotella species was discovered from drainage culture. Four days following mediastinoscopy, the patient was successfully extubated. Her respiratory and cardiac status continued to improve. She was discharged home with Amoxicillin/Clavulanic acid, Metronidazole and Linezolid and remains asymptomatic with no recurrence of infection or respiratory distress in 8 weeks follow up



- Mediastinal masses can manifest asymptotically, found incidentally on imaging, to life-threatening cardiopulmonary compromise, as in our patient's case.
- Posterior masses may result from a neurogenic tumor, embryologic cyst +/- abscess or caudal extension of retropharyngeal or oral infection.
- CoNS identified via EBUS/FNA and Prevotella species identified via Mediastinoscopy are found as part of normal skin flora and oral cavity, gut and vaginal mucosa.

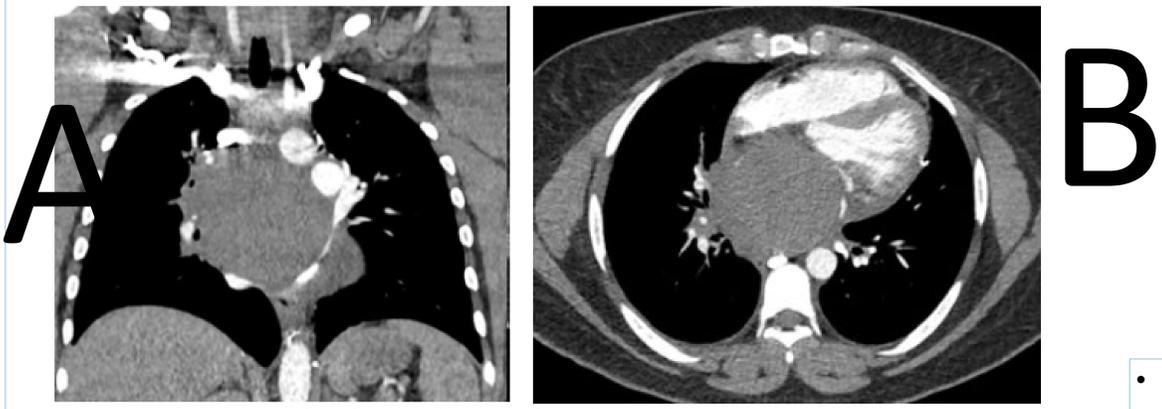


Figure 1: A & B- Coronal and sagittal views of mediastinal mass BEFORE mediastinoscopy

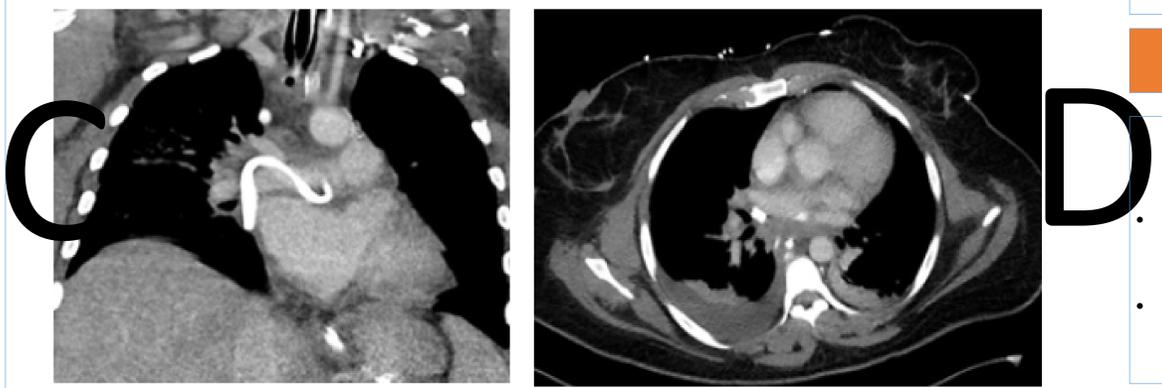
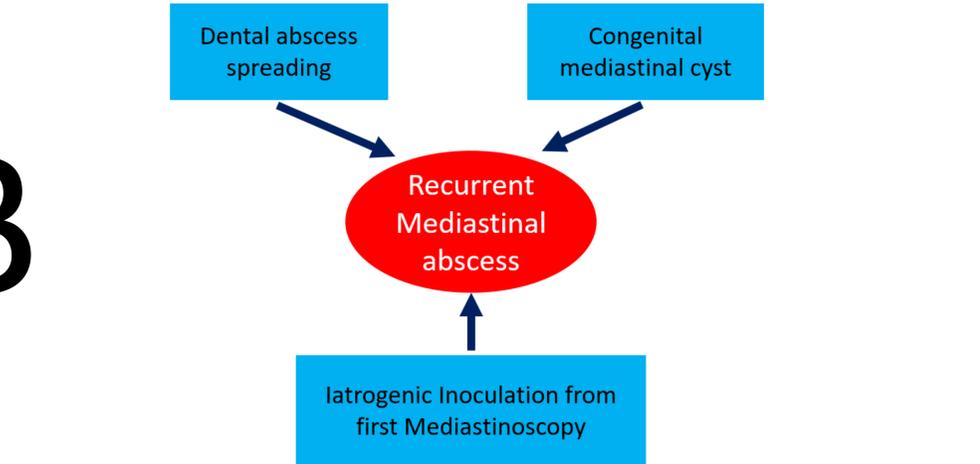


Figure 2: C & D- Coronal and sagittal views of mediastinal mass AFTER mediastinoscopy with drain placement



- In conclusion, mediastinal abscesses should be diagnosed promptly in order to initiate the appropriate therapy.
- Without surgical intervention the patient would not have survived due to cardiopulmonary collapse.

References

- [Asif AA, Roy M, Ahmad S: Rare case of Prevotella pleuritidis lung abscess. BMJ Case Rep. 2020, 13: 10.1136/bcr-2020-235960](#)
- [Kirwan WO, Walbaum PR, McCormack RJ: Cystic intrathoracic derivatives of the foregut and their complications. Thorax. 1973, 28:424-8. 10.1136/thx.28.4.424](#)
- [Moffatt-Bruce SD, Ross P: Mediastinal abscess after endobronchial ultrasound with transbronchial needle aspiration: a case report. J Cardiothorac Surg. 2010, 5: 10.1186/1749-8090-5-33](#)



Fatal cavitory invasive pulmonary aspergillosis in a patient with COVID 19

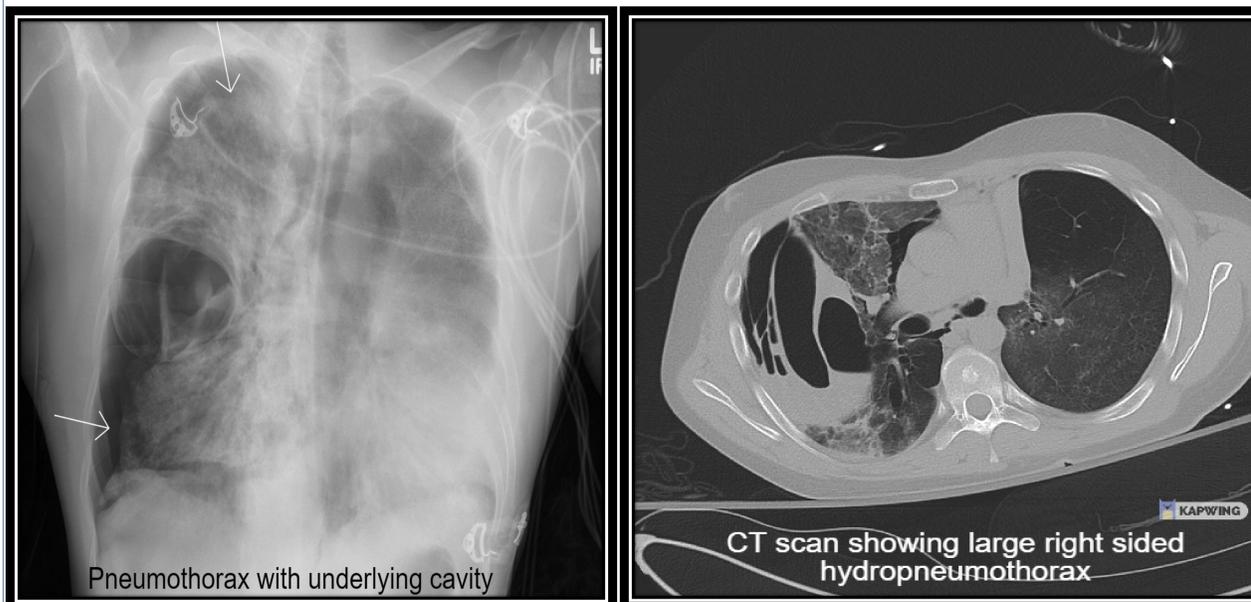
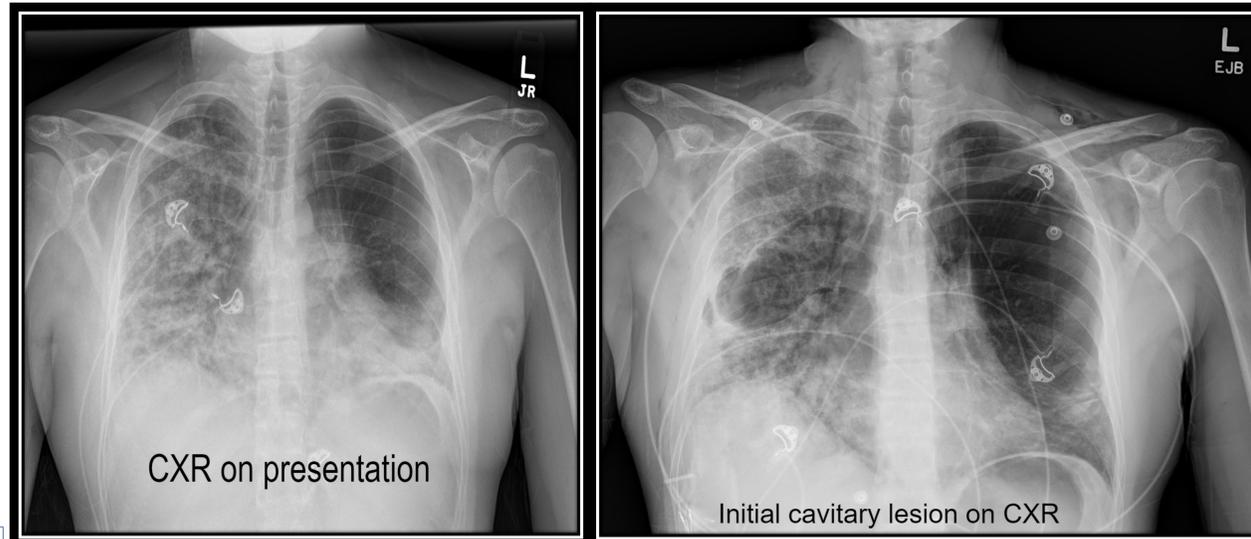
• Abdul Kareem Khan M.D, Zohaib Ahmed M.D, Christian Hernandez M.D

Introduction

- Cavitory lung lesions have a multifactorial etiology.
- The case describes an aggressive pulmonary cavity in a patient with GPA.
- The patient had respiratory failure resulting in death despite ECMO support.

Case Description

- Patient t in their 20s presented with dyspnea and fever.
- Recently treated for COVID 19 with steroids and antivirals.
- Mechanical ventilation started and CT chest showed large right lung cavity.
- Initial BAL showed no growth and empiric Abx started.
- VV ECMO started and repeat bronchial wash showed aspergillus .
- Patient expired within 2 weeks despite antifungals and life support.



Discussion

- The case highlights the diagnostic challenge of a lung cavity.
- Diagnosis was complicated due to underlying history of GPA.
- Chronic immunosuppression and COVID 19 are independent risk factors for pulmonary aspergillosis.
- Outcomes are very poor in cases of IPA and COVID pneumonia.
- The case also highlights importance of obtaining microbiologic and pathologic analysis of bronchial wash specimens.
- Surgery is not an option in such cases due to clinical instability.

Contact Information

Abdul.khan.md@adventhealth.com

AdventHealth Orlando Critical Care
Medicine Fellowship



Comparison of Performance Metrics in a Teaching ICU vs Non-Teaching ICU

Alexandra Lackey, MD; Zohaib Ahmed, MD; Naumaan Hafeez, MD; Brandon Kalivoda, MD; Aashish Mainali, MD; Bhumi Patel, MD; Vasily Simaev, MD; Martin Cearras, MD; Jian Guan, MD
 Department of Internal Medicine, AdventHealth, Orlando, FL

Introduction

- ICU can be a challenging learning environment for internal medicine residents.
- Teaching hospitals have been associated with higher cost without improved outcomes.
- Performance outcomes including patient safety and cost-effectiveness have not been adequately studied.
- We set up this study to compare outcomes between these two services in a medical ICU.

Methods

Inclusion criteria: all admissions to the medical ICU from 09/2018 to 03/2019.
Recorded variables : reason for ICU admission, race, gender, age, Acute Physiology Score (APS), APACHE III Score, hospital length of stay, ICU length of stay, direct cost, total cost, mortality, number of consultants, and number of packed RBC transfusions.
Statistical: t-test or Chi-square test to compare variables teaching versus non-teaching

Results

- A total of 1385 admissions to the medical ICU were enrolled (698 teaching, 687 non-teaching).
- Teaching and non-teaching patients were similar regarding race, gender, age, and severity scores.
- A trend toward shorter ICU length of stay exists for the teaching service (3.9 vs 4.3 days), but this did not reach statistical significance (p = 0.2505).
- Average total cost (\$47,440 vs \$48,430) and mortality (16.3% vs 16.9%) were similar between the teaching and non-teaching service respectively.
- The teaching service demonstrated superior utilization performance compared to that of the non-teaching service with an average of 1.2 vs 1.6 consultants (p = <0.0001) and 0.7 vs 1.1 PRBC transfusions (p = 0.0257).

Conclusion

- Teaching ICU with internal medicine resident involvement is associated with better utilization and non-inferior outcome metrics compared to the non-teaching service.
- Resident involvement in the ICU is not only vital to the future of our health system but can also be safe and cost-effective.

	Teaching	Non-teaching	
Total	698	687	
Age(Y)	61.9± 0.6	61.8 ±0.7	
Reason for ICU admission	DKA/HHS	36	30
	Hypovolemic shock	66	51
	Intoxication	19	14
	Others	194	211
	Respiratory Failure	265	277
	Septic shock	118	103
Race	White/Caucasian	442	422
	Asian/Pacific Islander	15	11
	Black/African/Haitian	162	168
	Others	79	86
Gender	Female	361(51.7%)	336(48.9%)
	Male	337(48.3%)	351(51.1%)

		Teaching	Non-teaching	P-value
Severity scores	Acute Physiology Score (APS)	48.6± 1	48.7± 1.1	0.9335
	APACHE III Score	62 ±1.1	62.2 ±1.2	0.9166
Outcome metrics	Hospital LOS	14.4± 0.6	14.1 ± 0.6	0.728
	ICU LOS	3.9± 0.2	4.3± 0.2	0.2505
	Direct Cost	23970± 1250	24570 ±1405	0.7521
	Total Cost	47440± 2313	48430± 2623	0.7779
	Mortality	16.3%(114/698)	16.9%(116/687)	0.8286
Utilization	Number of Consultant	1.2± 0.04	1.6± 0.06	< 0.0001
	Number of PRBC transfusion	0.7± 0.08	1.1± 0.1	0.0257

Rapid onset Fatal Amiodarone Induced Pulmonary Toxicity (AIPT) after Non cardiothoracic surgery: A Case Report

Aashish Mainali, MD; Kishor Khanal, MD; Xuan Guan, MD; Brandon Kalivoda MD; Alexandra Lackey MD
Internal Medicine Residency Program, AdventHealth Orlando

Introduction:

- Amiodarone is a class III antiarrhythmic agent. It is indicated for the management of life-threatening ventricular arrhythmias. It is also used off-label in multiple other clinical situations.
- AIPT can occur at any time after its use. However, more focus has been given to chronic AIPT in the medical literature as well as clinical practice. Acute AIPT remains an under-recognized cause of respiratory insufficiency in the hospitalized setting.
- Most cases of acute AIPT have been reported in the setting of cardiothoracic surgeries.

Case description:

- An 87 years old female with a past medical history of essential hypertension, Hypothyroidism, Osteoporosis and Chronic Kidney disease stage III, anemia of CKD had presented to the hospital with left hip pain after a mechanical fall. X-ray showed closed fracture of the left femur. Orthopedic surgery was planned. In the preoperative period, new onset of asymptomatic atrial fibrillation (AFib) with rapid ventricular rate (RVR) was noted, managed with metoprolol for rate control and amiodarone was also used due to paroxysms of Afib with RVR. Orthopedic surgical repair was performed.

Discussion :

- AIPT can present in various forms: interstitial pneumonitis, eosinophilic pneumonia, organizing pneumonia, acute respiratory distress syndrome, diffuse alveolar hemorrhage, pulmonary nodules, pleural disease.²
- The exact mechanism remains unclear, proposed mechanisms include a direct toxic effect of amiodarone, an immunologic influence of the drug, or a free radical effect.¹
- There is no consistency among the reported incidence of AIPT. In one of the reviews, the incidence of postoperative amiodarone-associated ARDS was approximately 15%.⁴ Mortality ranges from 9% in the chronic form to 50% in ARDS form.⁵

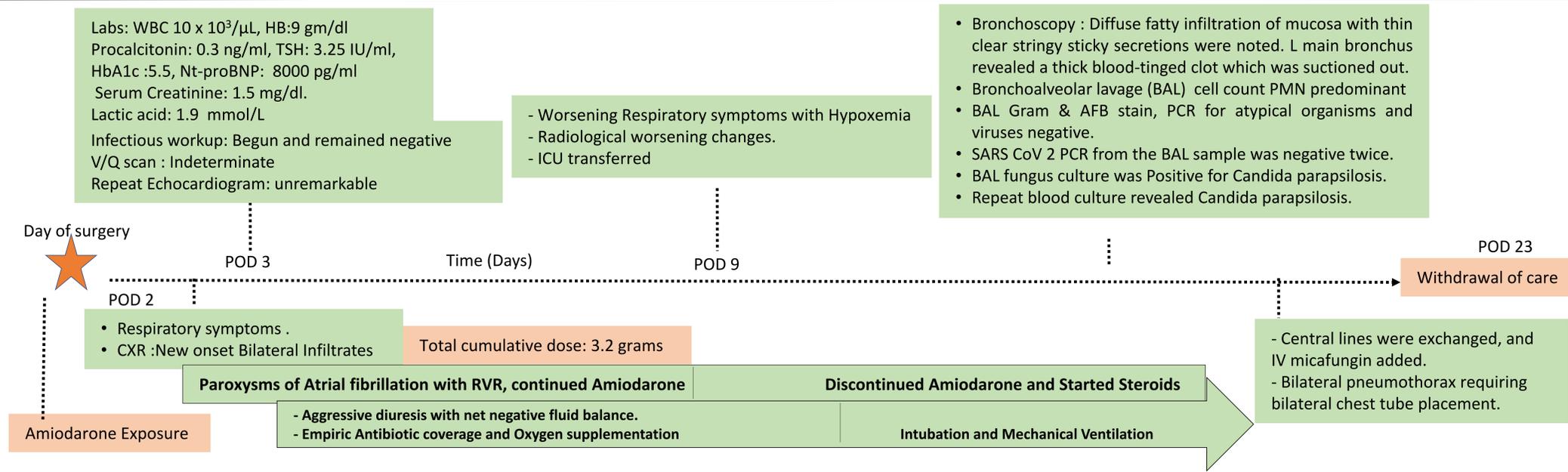


Figure 1:Timeline of Hospital course



Figure 2: (a)Pre-operative Chest X-ray (b) Chest X-ray postoperative day 2 (c) Chest X-ray postoperative day 9 (d) Chest X-ray postoperative day 9

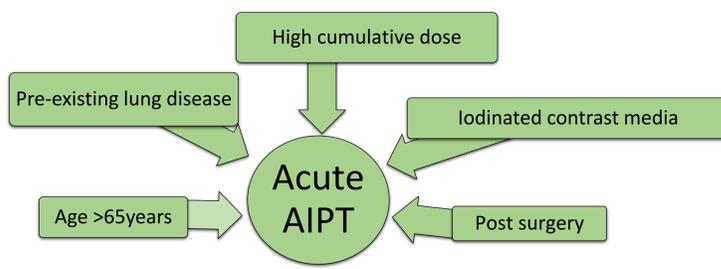


Figure 3: Factors influencing Acute AIPT

There are no diagnostic tests that can predict or diagnose this complication. This is a diagnosis of exclusion. Discontinuation of amiodarone, supportive treatment, and corticosteroids are recommended for treatment.

Conclusion :

- AIPT remains an underrecognized cause of respiratory failure in the hospitalized setting. Prompt diagnosis and early discontinuation of Amiodarone remains the key to the patient's optimal outcome.
- Continued caution needs to be taken in the wide use of amiodarone with appropriate patient selection especially in the elderly patients in the perioperative period.
- Based on prior reports which have shown improvement of AIPT with steroids, theoretically, there is a possibility that concomitant use of steroids with amiodarone during initiation may have a role in preventing acute fatal AIPT in these high-risk patient groups, especially in the perioperative setting.
- Further studies are needed to implement strategies to prevent fatal cases like ours, while other safe alternative therapies for management of cardiac arrhythmias are being developed.

References:

- Ashrafian, H., and P. Davey. "Is Amiodarone an Underrecognized Cause of Acute Respiratory Failure in the ICU?" *Chest* 120, no. 1 (July 2001): 275–82. <https://doi.org/10.1378/chest.120.1.275>.
- <https://www.uptodate.com/contents/amiodarone-pulmonary-toxicity>
- Range, Felix T., Ekkehard Hilker, Günter Breithardt, Boris Buerke, and Pia Lebedz. "Amiodarone-Induced Pulmonary Toxicity—A Fatal Case Report and Literature Review." *Cardiovascular Drugs and Therapy* 27, no. 3 (June 2013): 247–54. <https://doi.org/10.1007/s10557-013-6446-0>.
- Teerakanok, Jirapat, Pakpoom Tantrachoti, Phumpattra Chariyawong, and Kenneth Nugent. "Acute Amiodarone Pulmonary Toxicity After Surgical Procedures." *The American Journal of the Medical Sciences* 352, no. 6 (December 2016): 646–51. <https://doi.org/10.1016/j.amjms.2016.08.013>.
- Papiris, Spyros A., Christina Triantafyllidou, Likurgos Kolilekas, Despoina Markoulaki, and Effrosyni D. Manali. "Amiodarone: Review of Pulmonary Effects and Toxicity." *Drug Safety* 33, no. 7 (July 1, 2010): 539–58. <https://doi.org/10.2165/11532320>

TRAINING OF INTERNAL MEDICINE RESIDENTS IN DIAGNOSING RHEUMATOID ARTHRITIS & STARTING METHOTREXATE USING A MULTIDISCIPLINARY LECTURES QUALITY IMPROVEMENT PROJECT



Alsayed Osman MD, Ranjeet Kumar MD, Ahmad Almusa MD, Alexandra Lackey MD, Bahar Sumbul Yuksel MD, Jian Guan MD PhD

AdventHealth Orlando Internal Medicine Residency Program

Background

- Due to rheumatologists' scarcity, rheumatoid arthritis (RA) patients face a prolonged wait time before receiving recommended treatment.
- Many primary-care physicians do not feel comfortable starting disease-modifying antirheumatic drugs (DMARDs), which potentially contributes to caring delay.
- This QI project (QIP) is devised to test our hypothesis that multidisciplinary lectures will improve the internal medicine (IM) resident's knowledge and comfort level on RA's management.

Method

This QIP has two phases:
PHASE ONE

- Multidisciplinary Lectures (by IM residents, rheumatologists, pharmacists and real patients)
- Pre- and post-surveys comparing residents' knowledge/comfort level

PHASE TWO

- Follow existing and new patients in our outpatient clinic to verify early initiation of DMARD's treatment (shown to improve outcomes and prevent joint damage and disability)
- Initiation of MTX and rheumatologist referral

Figures



Results

- After classes, the percentage of residents who reported feeling comfortable diagnosing RA increased from 27% to 66% (Figure-A), 11% to 55% in starting methotrexate (Figure-C), and 0% to 50% in managing side effects of methotrexate (Figure-E).
- The percentage of residents who reported increased comfort level in initiating and managing adverse effects of MTX was also noted to increase significantly (Figure-B and D).
- Likewise, a significant increase of knowledge was seen, for instance, from 22% to 88% on tests needed to diagnose RA (Figure-F).

Discussion

- In phase one, we found that multidisciplinary lectures significantly increased the knowledge and comfort level in diagnosing and managing RA.
- Our second phase will determine if increasing theoretical knowledge and comfort level help residents treat RA patients.
- A brief handout regarding diagnosis and management of RA is made and distributed amongst residents to keep the knowledge fresh.
- Success in phase two will open our doors to extend this project for multiple other disorders that need early attention, such as SLE.

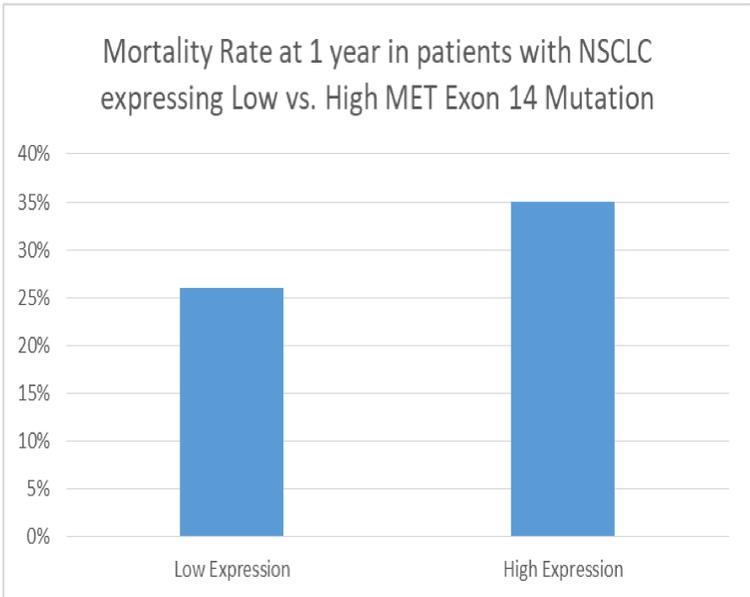
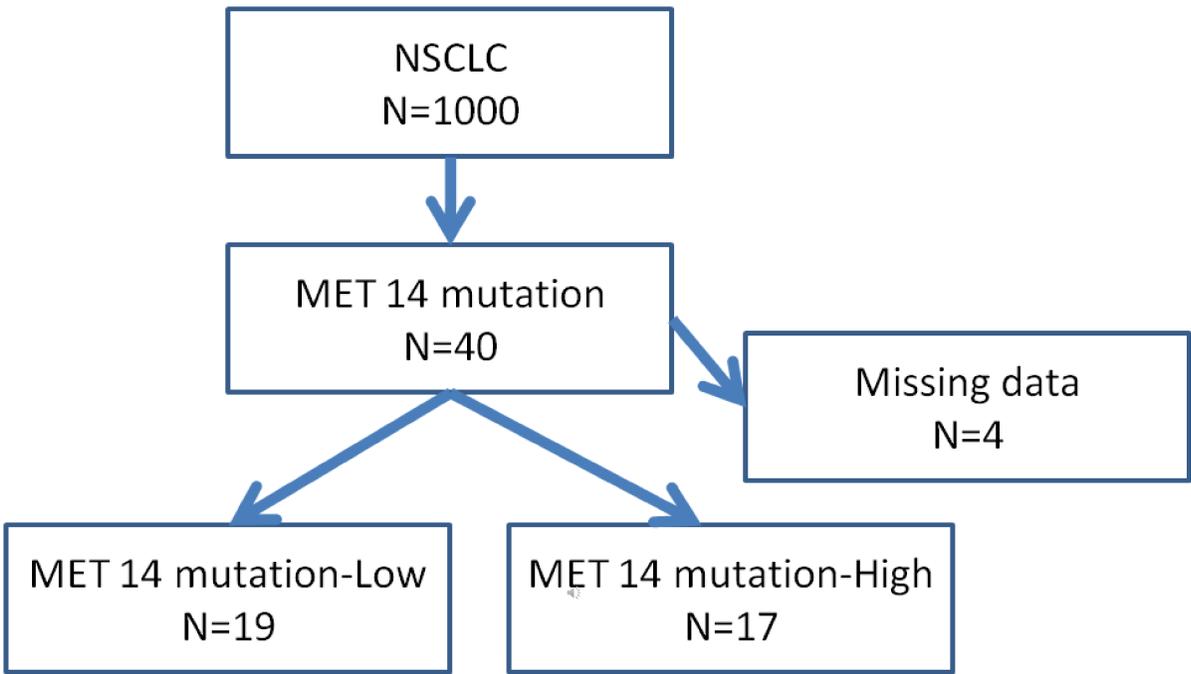
The Mortality Rate of MET Exon 14 Low and High Expression in Non-Small Cell Lung Cancer

James Wert DO, Jeff Chang, MD PhD, Jian Guan MD PhD
 Internal Medicine Residency Program, Adventhealth Orlando
 Department of Pathology, Adventhealth Orlando

Introduction

- MET exon 14 mutations occur in 3-4% of Non-small cell lung cancer (NSCLC)
- Targeted therapy aimed at the MET pathway is promising for patients diagnosed with NSCLC
- RNA next-generation sequencing (NGS) is the most sensitive method for detecting the MET 14 mutation
- The goal of this study is to evaluate the mortality rate at one year in patients grouped into low and high expression of Met Exon 14 based on RNA NGS

RESULTS



METHODS

A single-center retrospective study

Inclusion criteria:

- Tissue biopsy diagnosed with NSCLC
- Undergone RNA NGS in AdventHealth Orlando from 01/01/2019 and 01/30/2020.
- Detection of MET 14 splicing mutation

Chart review for clinical-pathological information

The MET14/Control gene ratio of 0.05 was used to differentiate between low and high expression.

	Low-expression	High-expression
Patient number	19	17
Age(y)	63.6[41-90]	74.3[60-85]
Gender(Female%)	12/19(63.2%)	13/17(76.5%)
Hx of smoking(%)	14/19(73.7%)	8/17(47.1%)
Stage 4 at diagnosis	13/19(68.4%)	12/17(70.6%)
Stage 1 at diagnosis	3/19(15.8%)	5/17(29.4%)
Brain metastasis	3/19(15.8%)	1/17(5.9%)
Histology type(Adenocarcinoma%)	18/19(94.7%)	13/17(76.5%)
Positive PD-L1 staining(>5%)	8/15(53%)	8/10(80%)
Other genomic alterations	13/19(68.4%)	None
Immunotherapy	4/19(21.1%)	1/17(5.9%)
MET inhibitor use	None	5/17(29.4%)

CONCLUSION

- Of the 19 patients defined as having low expression, 5 patients were deceased at one year. Of the 17 patients defined as having high expression, 6 patients were deceased at one year.
- Mortality at one year within the low expression group was 26% and within the high expression group was 35%.

Quality Improvement Project

Cause Analysis of Loss to Follow Up in an Internal Medicine Resident Continuity Clinic

Na Zhou, Zohaib Ahmed, James Wert, Ahisan Ansari, Jieying Liu, Peter Gerges, Baha Fawwaz, Mohammad Ali Esmali Pour, Syeda Taliya Rizvi, Karen Echevarria, Jian Guan
 AdventHealth Orlando, Internal Medicine Residency Program, Orlando, FL

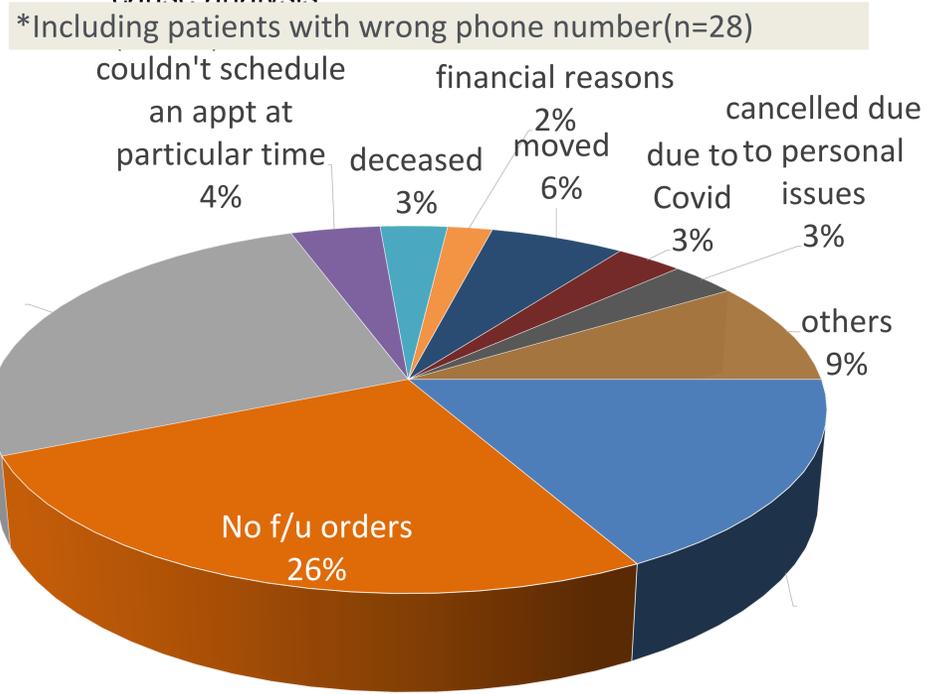
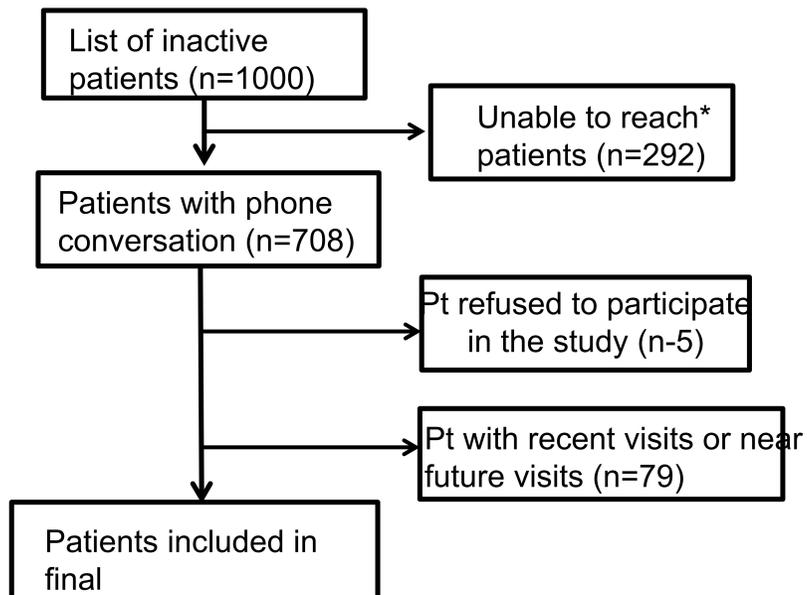
BACKGROUND

- A longitudinal continuity clinic experience is essential for IM residency training. Every effort should be made to improve residents' learning experience by preventing loss to follow up (LTFU).
- The objective of our quality improvement project is to investigate, identify and analyze the causes of LTFU in our IMR clinic.
- Based on the results, we'll take targeted approaches to improve the follow up rates and promote continuity of care in our IMR clinic

METHOD

- LTFU was defined as established patients who had not been seen in our facility for ≥ 6 months since last recorded clinic visits (between January 2019 and July 2019) and also did not have any follow-up appointment scheduled in the next 6 months.
- "Failure to reach" was defined as no response with at least 2 attempts in 2 different days.
- A list of 1000 patients identified as LTFU was generated in May 2020 with patients' basic information including age, gender, time of last visit and contact number. Chart reviews were conducted by trained residents and followed by phone calls.
- Post-project review and analysis was conducted aiming to find out how many follow-up appointments were scheduled after the project between July to December 2020.

STUDY FLOW DIAGRAM



RESULTS

- A total of 624 patients were included in final cause analysis.
- 26% (n=159) of LTFU patients were due to failure to place follow-up orders by physicians while 26% (n=159) had established care with other facilities.
- 17% patients (n=109) who didn't think it's important or necessary to follow up.
- Small portions of patients were due to covid-19 pandemic (4%), personal issues (3%), financial reasons (2%), moving (6%) or death (3%). 9% of patients were due to miscellaneous reasons.
- In post-project analysis, 20% (n=200) of 1000 LTFU patients scheduled follow-up appointments with our clinic between July 2020 to December 2020 after the project

CONCLUSIONS AND FUTURE PLAN

- Near half of LTFU patients (n=268, 43%) were preventable: either due to lack of follow up orders from resident physicians or poor understanding of importance of follow-up.
- In post project analysis, 20% (n=200) of 1000 LTFU patients scheduled appointments with our clinic after the project.
- We'll take targeted approaches by addressing follow-up order placement and patient education in phase 2 study

CONTACT INFO

Na Zhou
 Email: na.zhou.md@adventhealth.com
 Jian Guan
 Email: jian.guan.md@adventhealth.com

Quality Improvement: Palliative Care Tool for Advance Care Planning Discussions in Patients with Dementia in the Memory Care Clinic Setting

Rosales-Zincone J., Laird R., Mastroianni D., Buxton D.

Introduction

The Project intent:

- Develop an ACP tool that educates and promotes patient's participation in decision making while still maintaining capacity.
- Improve documentation of ACP discussions to 5% of clinic visits.
- Dementia is denoted by foreseeable crises and anticipated loss of decision-making capacity, yet at an unpredictable progression rate.
- Prior studies have revealed multiple barriers in obtaining ACP in memory care populations, leading to unknown care goals and increased patient and family distress.
- Patient Decision Aids are often implemented along with ACP tools to facilitate understanding of disease.

Methods

Setting:

- Memory Care Clinic with embedded PC learner from October 2020- January 2021.
- Clinic providers Implement with high-risk patients, primarily those with a change in diagnosis, declining clinical status, or requested by patient-caregiver dyad.

ACP Tool Creation:

- Qualitative literature review and local revision by the Memory Care and Palliative Care team.
- Identified common complex scenarios, i.e., artificial nutrition decision, falls/trauma, infections, disruptive behaviors, and care locations.

Main Outcomes:

- Created ACP tool
- Successfully documented ACP in patient chart

Disease Trajectory



Advance Care Planning Tool

"WHAT WE KNOW" FIRST VISIT

Getting to know your loved one:

- What would your loved one want me to know about them?
- What is a good day for you /your loved one?
- What gives you /your loved one peace or comfort?
- What else would you want to tell me about you/your loved one?

Understanding the illness:

- What do you understand is happening with you/your loved one?
- What questions do you have about your loved one's diagnosis?
- What is your greatest fear or concern regarding your loved one's diagnosis?
- What is most important to you /your DPOA to accomplish during this discussion?

Speaking for your loved one:

Your loved one has asked for you to be his DPOA- has the proper documentation been processed? May we have a copy of the document? Are there any other documents we may need to honor your loved one's wishes? Living will, DNR, do not hospitalize?

SECOND VISIT "WHAT IF'S"

- **Nutrition:** Thoughts regarding alternative means of nutrition if unable to swallow? What if the patient refuses to eat or drink?
- **Falls and trauma:** What if the patient sustains a fall at home or in the facility? Having an evaluation at the facility to assess for fracture, manage pain and discomfort at the facility vs evaluation in the emergency room if being seen at the facility is not feasible. Is surgery advised? If so, how will this change the function if the patient is able to walk, or bed bound?
- **Infections:** What if the patient has an infection? Pneumonia, urinary tract infection, skin infection, skin tear? What are the treatment options? Is it possible for the patient to be evaluated in the home or facility, start antibiotics by mouth, wound care, have close follow up vs going to the hospital for evaluation?
- **Disruptive moods or behaviors:** What is the patient's source of distress? Is it emotional, confusion, delirium, pain, insomnia, constipation, urinary retention? Can an evaluation take place in the home or facility vs going to the hospital?

Conclusions

Barriers:

- Provider barriers: Time constraints, provider comfort, need to educate other medical team members on how to become more familiar and comfortable with these discussions, educating patients and families, medical literacy, and prognostic awareness.

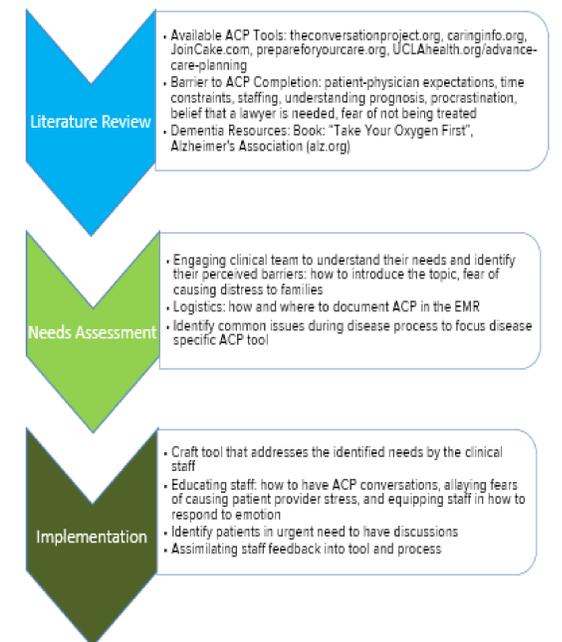
Positives:

- Helped the memory care clinic staff understand the need and urgency to obtain this documentation
- Facilitated ACP conversations by familiarizing/increasing provider comfort with the language used to begin this conversation from the Palliative Care standpoint.

Take-aways:

- More than one discussion with family is required to understand the patient's and family's knowledge about the complex disease trajectory and their readiness to discuss potentially stressful topics.
- Providers need to continually revisit likely changes in patients' and families' priorities as events occur and clinical health status evolves.
- A better mental construct is needed to focus on disease modifying, helpful therapies at the beginning of the disease trajectory and preparing for crises while the patient maintains capacity and guidance for families once capacity has been lost.

Developmental Process



Results

RESULTS PRE- TOOL IMPLEMENTATION CHART REVIEW

- The Memory Care Clinic had an average of 6.8% of patients with a documented advance directive for the years of 2016 to 2020.
- The total number of patients enrolled in the clinic in 2020 was 1324; 47 patients had a documented advance directive (3%)

Bibliography

Contact Information

Dr. Jeannette Rosales-Zincone at
 Jeannette.Rosales-
 Zincone.MD@adventhealth.com

References

- Butler, M., Ratner E, Mcree E. Ann Intern Med (2014) Decision Aids for Advance Care Planning. (161) 408-418.
- Lee, L., Hillier, L., Locklin, J. Journal of Palliative Care (2019) Advance Care planning in Persons with Dementia in Primary Care: Attitudes and Barriers Among Health-Care Professionals. 34(4) 48-254.
- Robinson, L. Dickson, C., European Association of Palliative Care (2012) Professionals' experiences of Advance Care Planning in Dementia and Palliative Care (10) 1-15 doi.org.10.1177/0269216312465651.
- Age and Aging by Oxford University Press. British Geriatrics Society. Advance care planning and the relevance of a palliative care approach in dementia (2006) 35 553-555. doi:10.1093/aging/aff103.
- Brazil, K. Carter, G., (2015) BMC Palliative Care. General Practitioners perceptions on Advance care planning for patients living with dementia. (14) 1-6.