

2026 Riverside Health APP Conference Keynote

Rewiring our brains with AI

When Productivity meets Patient Care

Andy Beatman
Director, Microsoft AI

Today's Learning Objectives

- Understand how AI elevates clinical readiness and patient preparation
- Explore how AI personalizes patient education at scale
- Learn how AI accelerates clinical documentation and HER workflows
- Discover how AI improves safety through real- time insights
- Understand how AI supports compliance and protects patient data
- Realize your professional potential through AI curiosity at work & at home

Why I'm here (street cred)



Journalism (2001-2004): In high school, editor of newspaper with attention to multimedia. As a writer, known for long form sports writing pieces centered on high performance student athletes overcoming personal traumas



SEO (2008-2016): Built expertise in on-page, technical SEO, maps + content strategies to drive growth at AWS, Tripadvisor, McDonald's and Fidelity Investments through countless algorithm shifts.



AI (2021-Present): PMM lead for Azure AI/Azure OpenAI Service at Microsoft + early consumer adopter of Copilot and ChatGPT



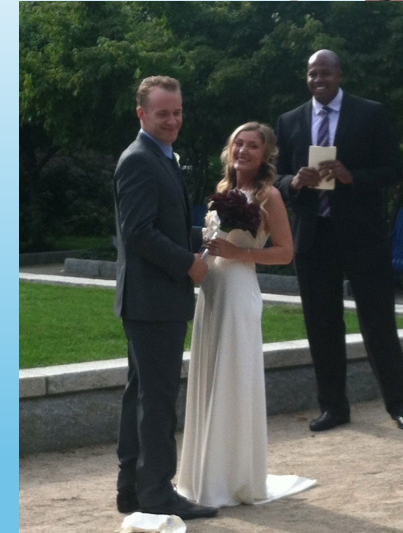
Comms & Digital Marketing (2004-2008): In college, held internships with GE for communications and the United States Olympic Committee for digital marketing. Focus on how technology elevates human experiences.



Voice Tech (2016-2021): During post-AWS tenure at Amazon, reimagined form factors while leading Alexa developer adoption and Prime member growth.



What matters to me the most is family, friends and staying curious in my professional career. Outside of work I love track & field, photography and studying history to predict the future. And yes, that is Omari Peterkin taking on the role of wedding officiant for my wife Corrin and I in 2013 😊



Why you are here: You are playing multiple roles with way too much to do!



Replying to messages



Reviewing and placing orders



Signing patient notes



Annotating patient charts



Completing flowsheets



Discharge summaries



Searching patient charts



Drafting return to work letters



Navigating the EHR



Accessing clinical content



Drafting referral letters



Obtaining prior authorization



You work across specialties, care settings, and devices

Ambulatory



Emergency
Department



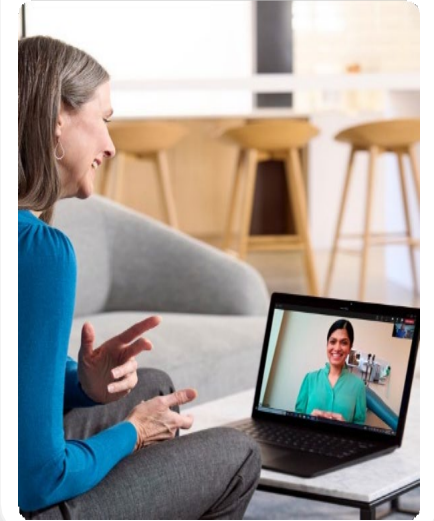
Inpatient



Post-acute



Home



Web



Mobile
iOS and Android



Desktop



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Pre-chart

During the exam

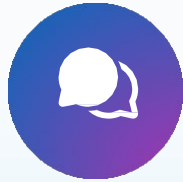
Post-chart

How to become Frontier - Advanced Practitioner



Enrich employee experiences

By empowering your workforce with AI tools that enhance productivity and automate workflows



Reinvest customer engagement

By enhancing patient experiences through personalized and connected encounters that improve care management



Reshape business processes

By unlocking value from clinical and operational data, while safeguarding that data across your infrastructure



Bend the curve on innovation

By accelerating research, discovery, and development with AI

Frontier Outcomes | Advanced Practitioner

Enrich employee experiences

Reduced the time clinicians spent on documenting during encounters by 56%



Reinvest customer engagement

Expedited patient care with AI enabling quick searches within a vast library of notes



Reshape business processes

Reduced time spent on administrative tasks by 90%



Bend the curve on innovation

Developed and deployed AI-powered tool that processes 10,000 patient messages/mo.





AI is already transforming Healthcare Provider

250K

AI has the potential to save up to 250,000 lives annually by 2030 through reducing healthcare worker errors by 86%¹

80%

Of hospitals now use AI to enhance patient care and workflow efficiency²

4/5

Physicians using AI for documentation reported stronger interpersonal connections with patients³

1. [The Journal of mHealth, 2023](#)

2. [Deloitte, 2023](#)

3. [ScienceDirect, 2024](#)

AI transformation requires proper data security and compliance

86%

of surveyors cited lack of transparency as the biggest concern with generative AI in healthcare

Lack of
transparency

[Wolters Kluwer, 2023](#)

83%

view the potential for AI to make mistakes as a major barrier to its use in healthcare

Potential of
mistakes

[Medtronic and Morning Consult, 2024](#)

63%

of individuals are concerned about the security of their personal health information

Data security
vulnerabilities

[Kpmg, 2024](#)



Top AI use cases for Healthcare Provider

Transform Clinical Workflow

 **Northwestern Medicine**
[Northwestern Medicine](#)
17% decrease in “pajama time”

 **SOLUTIONHEALTH**
[SolutionHealth](#)
50% decrease in time spent on documentation

Personalize patient engagement

 **Providence**
[Providence](#)
Improved message processing times and caregiver efficiency

kry
[Kry](#)
Improved patient engagement

Accelerate clinical research and patient care, including Trusted Research Environments

 **City of Hope**
[City of Hope](#)
Improved clinical decision-making and care management

 **Shriner**
Faster testing, discovery, and development

Enhance care management with actionable insights

 **UH Cutler Center**
[UH Cutler Center](#)
Reducing time spent on administrative tasks by 90%

 **MERCYHEALTH**
[Mercy Health](#)
Enabled proactive, personalized treatment

AI helps with optimizing workflow

Query

What can Copilot help you with? ⓘ

Was the patient experiencing earpain? ▶

Edit and append

What can Copilot help you with? ⓘ

Update the fever reading to 101 ▶

Summarize

What can Copilot help you with? ⓘ

Summarize the ear issues briefly for a referral to an otolaryngologist ▶

Create

What can Copilot help you with? ⓘ

Draft a prior authorization letter for a new biologic treatment for the rheumatoid arthritis patient ▶

Research

What can Copilot help you with? ⓘ

Outline the key steps and postoperative care for a laparoscopic cholecystectomy ▶

What can Copilot help you with? ⓘ

Enter your prompt ▶

   00:18

Assis

t What can Copilot help you with? ⓘ

Generate a concise APSO note summarizing this visit ▶

Code

What can Copilot help you with? ⓘ

What is the ICD-10 code for Alzheimer's disease? ▶

Rewiring our brains with AI Demos

2 use cases, 2
personas

Demo 1: Healthcare Provider

Enhance clinical workflow efficiency

Questions you probably ask at work

Healthcare scenario 1: Enhance clinical workflow efficiency

- At the beginning of each shift, what information do your clinicians receive about their appointments and patients to help prepare?
- How is patient education prepared? Is it tailored to individual needs or generic per diagnosis?
- How long does it take to document clinical notes and transfer them to electronic health records?
- What is the process to check for medication interactions at time of appointment?
- How do you ensure all documentation and patient information is HIPAA compliant?



Omari Peterkin, PMHNP
Healthcare Provider

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Shared in mail and chat

Jonsent 2 links and 1 document 1nm il
eall'rier whichyou ha...e yet to review.

Others you've missed

You've read the majority of your mail but still have **26 unread** messages and reminders.

$$f \vdash B \text{ !}, :-$$

Patient Name	Health Status	Upcoming Appointments	Recent Health Metrics
Alice J.	Stable	10AM - General Checkup	SP 120/80 mmHg, SMI: 24.5
Mark R.	Recovering	11:30AM - Follow-up	SP 120/80 mmHg, SMI: 24.5
Emily L.	Chronic	2PM - Consultation	BP 120/80 mmHg, BMI: 24.5
James C.	Acute Illness	3:45PM - Urgent Visit	OP 110/80 mmHg, OMI: 24.5

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January 30, 2024

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Draft a personalized education plan for managing type 2 diabetes, considering the patient's age, activity level, and dietary preferences in Contoso EHR

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Here's a comprehensive plan tailored to Alice's unique profile:

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1. Understanding Diabetes:

- Begin by explaining the basics of type 2 diabetes to Alice. Discuss how it affects blood sugar levels, insulin resistance, and the importance of managing it effectively.

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2. Dietary Recommendations:

Age Consideration: Since Alice's age is a factor, emphasize the need for a balanced diet that provides essential nutrients.

Dietary Preferences: Take into account Alice's dietary preferences. If she enjoys certain foods, find healthier alternatives or incorporate them in moderation.

Carbohydrates: Educate Alice about carbohydrate counting. Emphasize whole grains, fruits, vegetables, and legumes.

Portion Control: Teach her about portion sizes to prevent blood sugar spikes.

Meal Timing: Discuss the importance of regular meals and snacks to maintain stable blood sugar levels.

Avoid Sugary Beverages: Encourage water, herbal teas, and limit sugary drinks.

Limit Processed Foods: Minimize processed foods high in added sugars and unhealthy fats.

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3. Physical Activity:

Activity Level: Assess Alice's current activity level. If she's sedentary, encourage gradual increases in physical activity.

Exercise Plan: Recommend a mix of aerobic exercises (walking, swimming, cycling) and strength training. Aim for at least 30 minutes of moderate-intensity exercise per week.

Blood Sugar Monitoring: Explain how exercise impacts blood sugar levels and the importance

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Strengthen training. Aim for at least 150 minutes of moderate-intensity exercise per week.

Blood Sugar Monitoring: Explain how exercise impacts blood sugar levels and the importance of monitoring blood sugar levels before and after physical activity.

4. Medication Management:
Oral Medications: If Alice is on oral medications, ensure she takes them as prescribed.
Insulin: If following her treatment, educate her on proper injection techniques, timing, and monitoring.
Hypoglycemia Awareness: Teach her to recognize and manage low blood sugar episodes.

5. Stress Management:
• Stress and blood sugar: Explain the link between stress and blood sugar levels. Encourage stress reduction techniques like meditation, deep breathing, or yoga.

6. Regular Check-ups:
Healthcare Team: Reinforce the importance of regular follow-up visits with Dr. Garcia and other healthcare providers.
Blood Tests: Schedule regular blood tests to monitor HbA1c, lipid levels, and kidney function.

7. Support System:
• Family and Friends: Involve Alice's support network. Educate them about diabetes management and encourage their active participation.
Mindfulness: Practice mindfulness techniques for stress management. Encourage Alice to join a diabetes support group or community. Adjust her goals based on her progress, celebrate successes, and let her empower Alice to take charge of her health!

For more detailed information, you can refer to the American Diabetes Association's position statement on Diabetes Self-Management Education and Support in Type 2 Diabetes. It provides evidence-based guidelines for managing diabetes effectively.

If you have any further questions or need additional resources, feel free to ask!

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Subject:

Ahce. a type 2 diabetes patient, presented for a follow-up vlslt. She reports occasional fati9ue<1nd diffi culty managing bkiod sugar vds. Dietary preferences include who e 9, ainsand moderate fCvit in take Alice expresses inte rest in h corp(Inniogexercise intoher routine.

Objective:

Vital signs stable: BP 120/80 ,n nHg, HR 72 bpm.

- BMI: 28(overweigh)t,
- HbA1c: 7.2% (sigh tly e •v •led),

Assessment

l type 2 diabetes well:con:rol ledbut room for 1rrpro'lement.

- Addressfatigue and blood sugar fluctuations.
- RMI reduction and life,.tyle modifk ationsneeded.

Plan:

1. Oie:ary Education:

- Emphasize balanced meals, portion cont,ol, and carb coulHin9.
- (9 llak>ctle with et dlelition for peo onclldyick11lt1:.

2. ExædseP,estription:

- Recommend JOmh e-Sofbriscle walk<ngdaily.
- Shength lraining twice a wetk.

3. Wed ica:10n Review:

- (or t'nue merformin.
- Monitor for hypoglyccmi

4. Follow-up:

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Alice, a type 2 diabetes patient presented for a follow-up visit. She reports occasional fatigue and difficulty maintaining blood sugar. Dietary preferences include whole grains and moderate fruit intake. She expresses interest in incorporating exercise into her routine.

Objective:

Vitals signs stable: BP 120/80 mm-Hg, HR 72 bpm.

- BMI: 28 (obese weight).
- HbA1c: 7.2% (slightly elevated).

Assessment:

Type 2 diabetes well controlled but room for improvement.

- Address fatigue and blood sugar fluctuations.
- BMI reduction and lifestyle modifications needed.

Plan:

- Dietary Education:
 - Emphasize balanced meals, portion control, and carb counting.
 - Collaborate with a dietitian for personalized guidance.
- Exercise Prescription:
 - Recommend 30 minutes of brisk walking daily.
 - Strength training twice a week.
- Medication Review:
 - Continue metformin.
 - Monitor for hypoglycemia.
- Follow-up:
 - Schedule a 3-month visit.
 - Monitor progress and adjust plan as needed.

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Draft a post-surgery follow-up protocol for my patient who had knee surgery using Contoso Health.

Key Anions

Initial Post-Operative	Continue pain medication as appropriate for 30 minutes 4-5 times daily as needed. Monitor bandage.
Early Rehabilitation	Start physical therapy of motion and walking as tolerated. Optimize weight bearing for comfort.
Short-Term Follow-up	Evaluate wound healing and pain management. Gradual activity increase.
Mid-term Follow-up	Continue physical therapy as tolerated. Achieve full range of motion. Address any concerns.
Long-Term Follow-up	Periodic surgeon visits. Maintain active lifestyle. Monitor joint health.
Signs of Complications	Infection, DVT, implant issues, persistent pain.

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Check for any drug interactions with Emily Lee, birthdate 3/12/1974, and her current medications shown in Contoso EHR.

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Based on my review, there are no significant interactions between the proposed new medication for High Cholesterol and Emily Lee's existing medications.

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1. New Medication:
Name: Atorvastatin (Lipitor)
• Dosage: 20mg Once daily
• Frequency: Every evening

2. Monitoring:
• Regular follow-up visits to assess efficacy and monitor any potential side effects.
• Routine lipid profile checks to track cholesterol levels.

3. Patient Education:
Discuss the importance of adherence to the prescribed regimen.
Educate Emily on potential side effects (such as muscle pain, liver function changes) and when to seek medical attention.

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Prepare a draft discharge summary for the patient Ohiren F. who was admitted with pneomonia using details from Contoso EHR.

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Here's the discharge summary for Dhiren F.

Category	Details
Patitnl tnFO"naton	Namt: Oh4rt n F.Ag t . 8 Gt ndtr . Matt Admission, JlfKlHlJfS. 2024 Ols<hrg* o-Lc: Rfhu>y28.202il
Of0,n>saOOAdmisoi n	Admitt ed with community-acquired pneumonia . Initial prese.n1.u.on: Fever prod ucf rte co ugh. and shortness of breath. ChesX-ray con 'irm ed left•IO\et lobe consoidatfon. o sgmh ;,mt co motbld ties...
Treatment Provided	1. Antibiotics: Startfd on le-voffoxad n 750 mg IV daily • l rans-t10 to o J1 levofoxa<in J fte, d ln lcal'imp fCM.'tnC-nt.2. Oxyge n Therapy • Ma>tnf'don nasal u .nnula al 2 lites, per min1t: 3. PAin Manaocmf'n l• Roccei>ted aceta mi nophen lor (e,e,rctldd f scon•f01L
RecO'er>Progr ess	Fe-er resot'ed •H,thm".8 hours. lmpOV'tment il'Icoogh and dyspnea • Ol(')9\ .1,-,n1LtrO"lMble .-t9-'96%.
Discharge Medications	1. Levoflo xac in 500 mg ora lly on ce dalty fo1i n red.l)" ,,,; Ac* t:imino phen 6SOmg M nffdt"d for p.'lnlor fev.r. l lnh.:iler (al bute-to l)u.s ne«lNI for bronchosp.,sm
Fold>b•upplan	Primary c.are ph ysician (01 Pdte l) • Fo -0y-up apponl n"<rt on Match 10, 2024 Rfpc".dt:hc•X+1,y o n Apiil 15, 2024. Mon•c.e:tr•instruc tions nl With f);>t1 t

feel r'lee lo ,review al\d make anynecesary adjustments. Dhiren F.is ready for dischafge. aod we
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Review clinical documentation for Dhifen F../0<potent i al HIPAA compliance issues

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HIPAA Compliance Report

Patient: Ohiren F.

Summary:

Admission Date: January 1S, 2024

DischargeDate:February 28, 2024

Diagnosis: Community -acquired pneumonia

Treatment Provided: Antibiotics, oxygen therapy, pain management. incentivespirometry, fluid hydration, and respiratory therapy.

Recovery Progress: Fever resolved. improvement in cough and dyspnea.

Oisccklrgc MWications.:Levo floxacín.acetaminophen.and albuterol inhaler.

Follow-Up Plan:Primary care physician follow-up home care instructions.

HIPAA Compliance Assessment:

1. Patient Identifiers:

- No full nam,es addresses, or otherdirect identifierswere disdo-secl.
- Patient refened to by initials(Ohircn F.).

2. Protected Health Information (PHI);

- No sensitive health informati011beyoncl the diagnosis and treatment details,
- No ment ion of specific lab resuhs or personal history.

3. Authonzation and Consent

- Documentation indCates proper consent for treatment and procedures.
- No un.aulhor ii ed disclosures.

4. Access Control;

Access restricted to aUlhorized healthcare personnel.

No ev e nce of unauthorized access.

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Treatment Provided: Antibiotics, OX/ gen therapy, pain management, incentive spirometry, fluid hydration, and respiratory therapy.

Recovery Progress: I've resolved, improvement in cough and dyspnea.

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Follow-Up Plan: Primary care physician follow-up home care instructions

HIPAA Compliance Assessment:

1. Patient Identifiers:

- No full names, addresses or other direct identifiers were disclosed.
- Patient referred to by initials (Ohiren F.).

2. Protected Health Information (PHI):

- No sensitive health information beyond the diagnosis and treatment details.
- No mention of specific lab results or personal history.

3. Authorization and Consent

- Documentation indicates proper consent for treatment and procedures.
- No unauthorized disclosures.

4. Access Control:

- Access restricted to authorized healthcare personnel.
- No evidence of unauthorized access.

5. Transmission Security:

- Electronic records transmitted securely within the hospital network.
- No unencrypted communication.

6. Audit Trail:

- Proper logging of access, modifications, and disclosures.
- No suspicious activity detected.

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Scenario 2: Healthcare - Organize and manage research knowledge

Questions you probably ask at work

Scenario 2: Organize and manage research knowledge

- What is the process and how long does it take to identify, review, and analyze research data and sources to create a comprehensive summary of latest findings on a specific topic?
- How long does it take to find ongoing clinical trials and cross-reference the findings from each to understand potential new research directions?
- How do you find potential gaps in your research methodologies alignment with FDA and HIPAA regulations?
- What is the process to identify and write potential grant applications?
- How do you conduct patent searches and analysis to protect intellectual property?



Terry Thompson, ACNP-BC, FHM
Health Sciences Researcher

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For Microsoft 365

You've been mentioned

view, I've been mentioned in 2 chats and 3 chats that you have not read yet.

From your leadership

Satya and Perry have both sent messages in the last 24 hours. Would you like to review?

Shared in mail and chat

consent 2 links and 1 document in mail earlier which you have yet to review.

Mixed conversations from collaborators

view, I have 12 messages that you have missed from your top collaborators. Katri, Elvia, Mark and others are trying to reach you. Want me to recap?

Others you've missed

You've read the majority of your mail but still have 2 unread messages and mails.

View Prompts

Compile the latest research on immunotherapy for lung cancer from the past year using Contoso Research.

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January 30, 2024

Compile the latest research on immunotherapy for lung cancer from the past year using Contoso Research.

Certainly! Here's a summary of recent research on immunotherapy for lung cancer from the past year, based on the latest research available:

1. Lung Cancer Immunotherapy: Progress, Pitfalls, and Promises:
Immunotherapy has emerged as a promising approach to cancer treatment, particularly for lung cancer. Recent clinical trials on lung cancer patients (without a targetable oncogenic driver) have shown significant and sustained responses when treated with programmed death-1 (PD-1) inhibitors. These results suggest that immunotherapy may be a viable treatment option for a broader population of lung cancer patients. However, challenges remain, including identifying the right patients and understanding the mechanisms of resistance. Different tumor-specific vaccines and combination therapies are being explored, showing promise in early-stage trials. Additionally, the use of adoptive cell therapy (CAR T, TCR) is being explored as a potential treatment for lung cancer. The combination of immunotherapy with traditional chemotherapy is also being investigated.

2. Immunotherapy for Lung Cancer: New Hopes and FDA Approvals:
Recent clinical studies treating patients with immunotherapy have demonstrated significant improvements in survival and quality of life. The FDA has approved several new immunotherapy treatments for lung cancer, including pembrolizumab (Keytruda) and nivolumab (Opdivo). These approvals represent a significant step forward in the treatment of lung cancer, offering patients new options and hope. The FDA also approved a combination of immunotherapy and chemotherapy as a first-line therapy for lung cancer, further expanding the treatment options available to patients.

3. Immunotherapy as a Novel Approach:
A study shows that inhaled exosomes can efficiently reach the lung and deliver an anti-tumor response, potentially offering a novel approach to lung cancer treatment.

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2. Immunotherapy for Lung Cancer: New Hope and FDA Approvals:

FDA approvals include treatments for more lung cancer patients including using immunotherapy as a first-line therapy instead of conventional treatments.

A study shows that inhaled exosomes can efficiently reach the lung and deliver anti-inflammatory cargo, IL-12 mRNA

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- Challenges and new directions for future development, are being explored 4

References 1 Molecular Cancer 2 Cancer Research Institute +3 more

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2. Immunotherapy for Lung Cancer: New Hope and FDA Approvals:
Recent clinical studies treating patients with immunotherapy have demonstrated significant patient improvement.
FDA approvals include treatments for more lung cancer, including using immunotherapy as a first-line therapy instead of conventional treatments. 2

3. Inhaled Exosomes as a Novel Approach:
A study shows that inhaled exosomes can efficiently reach the lung and deliver anti-tumor cancer cargo. IL-12 mRNA.
This development is a major step for advancing inhalable drugs for lung cancer treatment. 3

4. Advances in Perioperative and Advanced Lung Cancer Immunotherapy:
Immunotherapy has moved from the backline to the front line, even for early-stage patients.
• Challenges and new directions for future development are being explored. 4

In summary, immunotherapy holds promise in lung cancer treatment, with ongoing research focusing on improving therapeutic outcomes and addressing challenges. If you're interested in contributing to research efforts, consider joining the Lung Cancer Registry to help researchers learn from patients on immunotherapy.

References

1 Molecular Cancer

2 Cancer Research Institute

+3 more

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Categorize these studies by drug efficacy and side effects.

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Categorize these studies by drug efficacy and side effects.

Certainly! Let's categorize the recent studies on immunotherapy. I can categorize them based on the specified criteria:

- Drug Efficacy:**
 - PD-1/PO-L1 Checkpoint Blockade Immunotherapy: These have shown significant and sustained responses in lung cancer patients without targetable oncogenic driver alterations.
 - Inhaled Exosomes with IL-12 mRNA: This novel approach demonstrates efficient delivery of an anti-lung cancer cargo.
- Side Effects:**

While immunotherapies offer promising results, they can also cause side effects. Common side effects include immune-related adverse events such as fatigue, skin rash, diarrhea, and inflammation of organs. Specific side effects may vary depending on the type of immunotherapy used.
- Patient Quality of Life:**

Immunotherapy's tolerable safety profile contributes positively to patient quality of life.

 - However, it's essential to monitor and manage any side effects to ensure patients maintain a good quality of life during treatment.

Remember that individual responses to immunotherapy can vary, and ongoing research aims to optimize drug efficacy while minimizing side effects to enhance patient well-being.

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Cross-reference these studies with a.irrent clinical trials underway.

Certainly! Let's cross-reference the recent studies on intrathecal therapy for LJDG compared with current clinical trials:

1. FDA-Approved Adjuvant Immunotherapy:
A phase 3 clinical trial demonstrated the benefit of atezolizumab, an immunotherapy drug, for patients with early-stage non-small cell lung cancer (NSCLC). This approval marks a significant advancement in treating early-stage lung cancer. 1
2. Major Clinical Trials Demonstrating Efficacy:
Several major clinical trials have highlighted the efficacy of immune checkpoint inhibitors (ICI) in immunotherapy for lung cancer. These trials have shown positive outcomes in terms of patient improvement and survival. 2
Notably, immunotherapy has been used either alone or in combination with other treatments, resulting in FDA approvals for several lung cancer patients. Some patients now receive immunotherapy as a first-line treatment, replacing conventional treatments. 1
3. Ongoing Research and Targeted Therapy
Researchers are actively investigating novel immunotherapy and targeted therapy options for lung cancer.
Special mention is given to identifying gene signatures for malignancy and survival. Novel developing targeted therapies. 4

In 2011, the field of immunotherapy cancer is rapidly evolving, with ongoing clinical trials exploring new approaches and improving patient outcomes.

References : 1: National Climate Institute 2: Zingales, J. (2005) Journal of Financial Economics • 2 more

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Encourage users to contribute their experiences, questions, and insights. Allow comments and discussions on articles.

1. Create a *webinar* . will it be on for Q&A " You s with experience .

2. Organize Information:

Create categories or tags for different aspects of immunotherapy (drug efficacy, side effects, patient quality of life).

3. Develop a User-friendly search function to help users find relevant content.

4. Collaborate with Experts:

Reach out to researchers, oncologists, and immunotherapy specialists. Invite them to participate, contribute, or provide expert opinions.

5. Build a Patient Advocacy Group or Support Network.

6. Stay Updated:

- Regularly update your platform with the latest research, clinical trials, and news.
- Use newsletters or email subscriptions to notify users about new content.

7. Promote Your Platform:

- Share your platform on social media, relevant forums, and health-related communities.
- Collaborate with other health-related websites or organizations for promotion.

8. Privacy and Ethics:

- Ensure compliance with privacy regulations (such as GDPR or HIPAA) when handling user data.
- Respect patient privacy and confidentiality.

9. Feedback and Iteration:

- Gather feedback from users and continuously improve your platform based on their needs.
- Adapt to emerging trends and technologies in the field.

Remember, creating a knowledge-sharing platform requires dedication, passion, and a commitment to fostering a collaborative and supportive community. Best of luck!

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Analyze trends in immunotherapy research over the past five years.

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Here are trends in immunotherapy research for cancer over the past five years. Here's a summary based on recent studies:

- Growth in Publications:**
The number of publications related to immunotherapy in cancer has significantly increased over the last two decades.
In 2019, there were over 10,000 publications on the topic, indicating substantial developments in the field.¹
- Research Categories:**
Oncology remains the primary research category (38.08% of studies), emphasizing the focus on cancer immunotherapy.
Immunology ranks second (17.52%), reflecting the importance of understanding the immune response in cancer treatment.
- Active Countries:**
The top active countries in immunotherapy research include the United States, China, Japan, and Germany.
Collaboration clusters exist between Asian countries and European countries, fostering global research efforts.²
- Journal and Funding Agencies:**
Journals: Notably, *Nature* and *Journal of Clinical Investigation* had the highest impact factor, (IF = 13.66) among the top journals.
Funding Agencies: The US funding agencies continue to lead, with the National Natural Science Foundation of China also playing a significant role.³
- Key Research Topics:**
Key research topics include immune checkpoint inhibitors, immunomodulators, HPV vaccination, CAR T cells, and gene mutations/umor profiling.⁴

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In 2021, the number of publications was almost ten times the number in 2000, indicating substantial development in this field.

2. Research Categories:

Oncology remains the primary research category (38.08% of studies), emphasizing the focus on cancer immunotherapy.

Immunity-related papers (17.52%), <P>highlighting the importance of understanding the immune response in cancer treatment.

3. Active Countries:

The top active countries in immunotherapy research include the United States, China, Japan, and Germany.

Collaboration exists between Asian countries and European countries, fostering global research efforts.

4. Journals and Funding Agencies:

Journals: Notably, Human Vaccines & Immunotherapeutics had the highest impact factor (IF = 13.864) among the top ten journals.

Funding Agencies: The US funding agency continues to lead, with the National Natural Science Foundation of China also playing a significant role.

5. Hot Research Topics:

- Key research topics include immune checkpoint inhibitors, tumor microenvironment, HPV vaccination, CAR-T cells and gene mutations/tumor profiling.

In summary, the field of immunotherapy is dynamic and ongoing, research aims to improve cancer treatment outcomes.

References

1. Human Vaccines & Immunotherapeutics / ImmunoCell Engineering, immunotherapy

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How do our research methodologies align with FDA and HIPAA regulations according to Northwind Compliance

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How do our research methodologies align with both FDA (Food and Drug Administration) and HIPAA (Health Insurance Portability and Accountability Act) regulations:

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1. FDA Regulations for Clinical Trials:

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The FDA governs clinical trials involving investigational drugs, biologics, and medical devices.

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Key regulations include:

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Informed Consent (21 CFR Part 50): Ensures subjects provide informed consent before participating in research.

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Institutional Review Boards (IRBs) (21 CFR Part 56): IRBs review and approve research protocols to protect subjects.

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Investigational New Drug Application (IND) (21 CFR Part 312): Required for testing new drugs in humans.

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Premarket Approval of Medical Devices (21 CFR Part 814): Applies to medical device trials.

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The FDA also recently proposed new regulations related to single IRB review and informed consent document organization.

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2. HIPAA Privacy Rule for Research:

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The HIPAA Privacy Rule governs the use and disclosure of protected health information (PHI) for research purposes.

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Researchers can use or disclose PHI with individual authorization or under specific circumstances:

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• Authorization: Obtain individual consent for using or disclosing PHI.

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• Waiver of Authorization: Obtain documented IRB or Privacy Board approval for alterations or waivers of authorization.

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The Privacy Rule balances privacy protection with researchers' access to necessary medical information for vital research.

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3. Common Rule and Existing Federal Protections:

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Most research involving human subjects operates under the Common Rule (45 CFR Part 46).

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Common Rule (45 CFR Part 46): Establishes ethical principles and guidelines for the protection of human subjects of research.

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Researcherscan use or ci sdose PHI with individua' authorization or u11Cerspecifccircumstances:

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• Wa1verof Authorization: Ob tain documented IRBor Privacy Board approval for alterations or wa vcrs of .iuthoriz.1t on.

ThePrivacy Ruic balancesprivJcy protection with rcscJrchcrs.:accc s5 to necessary modicJl information for vital research. /

3. Co1nr11onRuleclndExitingFed.:rd f Prote(ti on)..

Most research invol v11ghumaf1 subjects operates u f1cler the Common Rule (ES GFRPart46, Subpart A) and/or the FDA's 1umansubject protec1o n regulations (21 CFR Parts SOand S6).

These regulationsinclude pro vations to ensure subject p rivacyand conf1dCOial1ty.

ThePrivacy Rule bu1lds upon these existing protections, creating equal standards for research governed by both existing Fede,al regulations and non -Federally funded research. /

4. Research Reposito ries andHIPAA:

• HIP,1l allows the use;ind d1:sdosedPHIfrom exis: rg repositoriesfor research purp oses.

• Resea, chers mul>ladhe-,etoHIPMregulation; and obtain IRB approva er wa1:ets J

In ummary al1gning you 1 , e each met: odologie withbothFDA and HIPAA ,egul dtioos involve obtaining proper approvals. ensuring infom,ed co nsent. and safegua rd1ng privacywhile ad'Jancing vital research.

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Grant App licat ion: Adva ncing Imm unother a py Research for lung Cancer

Project Overview
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Background and Significance

Lungcancer accounts for a substantiJl proportion or canc<r<rchncddeathsworldwide. While t1dttitona tre(111li t'nh (c.heinothe rapy , radiation) havi:"limitat ions,immu not nt:rdpy o ff e a tiQvel parrd gm by harnessing the patie:lt a,.imr"une system to tafget cal)cu cells. Rece-Hstu<1,ie;;, have highlighted thesuccess of immuIt, checkpoint inhib tofs,ado otive celltherap;! s and tumor*spe,cific vaccinations in lung canet r trtatment. However,challenges persist.ir lt.Cu'lg var ableresponse,rates immune-related acverse events,and the need fer pero;nalizedapproache,;. Oufptoject seek toaddress tht ,;e gaps by-

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- ### Specific Aims

- ## Methods and Timing

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• Implement supportive care interventions to enhance quality of life. Methods and Timeline

1. Year 1:

- Literature review and data collection.
- Initiate pre-clinical studies.
- Establish collaborations with other research centers.

2. Year 2:

- Biomarker analysis using patient samples.
- Begin patient recruitment: feasibility trial.
- Develop patient education materials.

3. Year 3:

- Clinical trial implementation.
- Monitor treatment responses and adverse events.
- Engage patient advocacy groups.

4. Year 4:

- Data analysis and interpretation.
- Publish findings in peer-reviewed journals.
- Present findings at national and international conferences.

Budget and Justification

1. Personnel (research staff, clinicians, data analysts)
2. Laboratory supplies and reagents
3. Patient recruitment and consent processes
4. Biomarker assays and sequencing
5. Travel for conferences and collaboration meetings

Expected Outcomes

1. Identification of novel immunotherapy targets.
2. Improved patient selection for immunotherapy.
3. Enhanced patient well-being during treatment.

Conclusion

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• Monitor multiple responses and note <Se events.

• Engage public advocacy groups.

4. Year 4:

• Oat analysis and interpretation.

• Publish findings in peer-reviewed journals.

• Present at national and international conferences.

Budget and Justification

1. Personnel (research staff, clinicians, data analysts)

2. Laboratory supplies and reagents

3. Participant recruitment and consent processes

4. Biomarker assays and sequencing

5. Travel for conferences and collaboration meetings

Expected Outcomes

1. Identification of novel immunotherapy targets.

2. Improved patient selection for immunotherapy.

3. Enhanced patient well-being during treatment.

Conclusion

Our project aims to advance the field of immunotherapy for lung cancer, ultimately benefiting patients worldwide. We seek funding to accelerate research, foster collaboration, and translate discoveries into clinical practice.

feel free to adapt this draft to your specific research objectives, institutional guidelines, and grant requirements. Best of luck with your application!

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Grant Application: Advancing Immunotherapeutic Research for lung Cancer

Project Overview

Title: Enhancing Immunotherapeutic Approaches for Lung Cancer Treatment

Pocip:,I InvstigJtor. Or. Daniela Affiliation: Contoso Medical Center

Project Summary: Lung cancer remains a leading cause of death worldwide. While traditional treatments (chemotherapy, radiation) have shown some success, immunotherapy has emerged as a promising, innovative approach to improve patient outcomes. Our project aims to further explore and optimize immunotherapeutic strategies specifically for lung cancer patients.

Background and Significance

Lung cancer accounts for a substantial proportion of cancer-related deaths worldwide. While traditional treatments (chemotherapy, radiation) have shown some success, immunotherapy has emerged as a promising, innovative approach to improve patient outcomes. Our project aims to further explore and optimize immunotherapeutic strategies specifically for lung cancer patients.

However, challenges persist in identifying biomarkers for treatment response, and optimizing the combination of immunotherapeutic agents. Our project aims to address these challenges by:

1. Identifying predictive biomarkers for treatment response.

2. Enhancing patient quality of life during immunotherapy.

Specific Aims

1. Evaluate Novel Immunotherapeutic Agents

Conduct clinical studies to assess the efficacy of emerging immunotherapeutic agents (e.g., novel checkpoint inhibitors, cytokine-based therapies).

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These claims aim to safeguard innovative biotherapeu-

OvcJView of Immuno therapy Areas:

let's explore four active areas within the immunotherapy field:

These drugs target immune checkpoints (e.g., PD-1/PD-L1) to enhance the immune response against cancer cells.

b. Antibody-Drug Conjugates (ADCs);

- Patent claims for ADCs may focus on specific antibody-drug linkers, payload molecules, and conjugation methods.

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b. An: body-01u9Coujug• :• s(AOC,):

- Patent claims for AOCs may focus on specific antibody-antigen linkers, payload molecules, and conjugation methods.

CAR-T (chimeric antigen receptor T cell) therapy involves genetically modifying patient's T cells to target *cancer* cells.

Patent claim\$ in thi>Jrc a fl1ay cover CAR cor1sucts, U)anv factum'tg p1O<<.Sscs, andpati<"fl1t
vec iri th er ;l pie.

bsAbs simultaneously bind to two different targets,

- Patent claims for bsAbs may address novel formats, binding specificities, and therapeutic applications,

The Journey began in the early 1980s with the approval of Orthoclone O T3 for kidney transplant rejection prevention.

Since then, therapeutic monoclonal antibodies have become a major class of drugs, including Fe-
haptoglobin, antibody conjugated ADCs.

Generates billions of dollars in annual sales, in M1, no therapy patent disputes < any significant financial stakes.

Notable cases include *Cento* or *Ort*—O Biotech, Inc., *Ahbon Labs* which invalidated claim, (Overing Abl) *Ott*'S *Hwnira*G.

In summary, the patent landscape for immunotherapy drugs is dynamic, with ongoing research and fierce competition. While the market is currently dominated by a few key players, the entry of new entrants and the development of novel therapies suggest a highly competitive future. The patent landscape is a complex and evolving one, and staying up-to-date on the latest developments is crucial for anyone involved in the field.

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One last thing...

It's Time to Reflect & Spin the AI Wheel!

Moment of Reflection & Introspection

Spin the AI Rewire Wheel –
Context is Everything

Each Spin = One Behavior Flip

Your Moment

a few minutes to think and discuss

what is really holding you back at work

what is your AI superpower

how will your future self use AI

Our Moment

Let's spin the Rewire wheel

Many scenarios, unlimited outcomes

If you find a scenario you like, you are getting closer to the Meaning!



Click to open the Brain Rewire Wheel in a different window

Rewired Reflections

- 1) how do you feel?**
- 2) what is your next
move or daily
rewire?**
- 3) how will you think differently
and build a better future
for yourself
for your patients
and the world?**

THANK YOU! Seriously. I am grateful.