

# A Bold New Vision for Young Adult Cancer Care

Group 3

Hackathon 2025



Memorial Sloan Kettering  
Cancer Center

# Meet “THE Interns”

## Content & Outreach

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## Technical

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## Impact

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## Goals:

- To attract adolescents and young adults (AYA) from ages 18-39 to MSK
- To support AYAs in their decision to receive cancer care by removing barriers
- To retain new and current patients throughout their journey at MSK

# Outreach & Content

# Bringing AYAs to MSK

## The First Step

In our fast-paced, modern world, how do we connect with adolescents and young adults?

We believe that outreach through content is the way to go.



# The Problem

## Why AYAs aren't engaging with Cancer Care and MSK

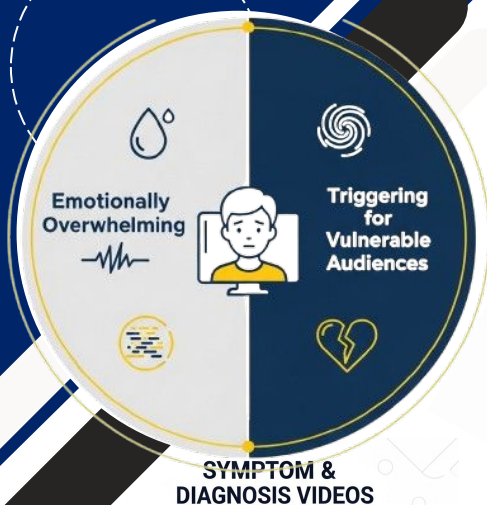
- Too formal
- Not relatable
- Little presence on platforms where AYAs actually hang out

Right now, MSK's social media is informative, but it's not fully connecting with adolescents and young adults.

It's formal and competing with the endless scroll of TikTok, Instagram and Youtube.

If they've never heard of MSK before, our posts might just get lost in the feed.

## Why People are scared to watch Videos about cancer



# The Opportunity

## Where we can meet them

Our idea:

- Launch bold, yet simple ads designed to grab your attention in 3 seconds, just enough to plant to MSK name in your minds.
- Reinforce MSK's mission online

The ads get us noticed and social media gets them engaged.



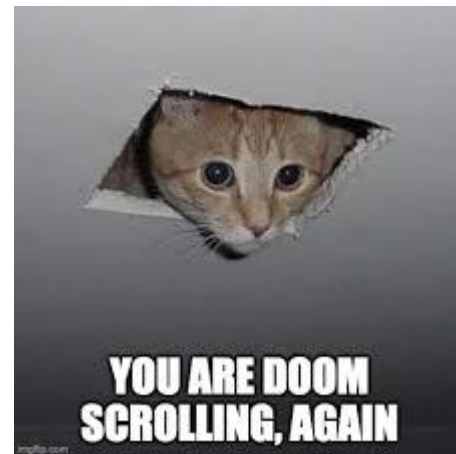


# Campaign Plan

## Our Ad and Social Media Strategy

These platforms aren't just entertainment but they can be where trust is built. It can remove fear and show the ease of the process

If we can meet AYAs where they are, such as TikTok and Instagram, we can make cancer care feel more approachable, familiar and accessible.



# Messaging That Connects

## Simple Ads that Attract Patients

- Positive Imagery Reduces Fear
- Relatable & Aspirational
- Familiarity Builds Trust
- Encouraging Messaging



# Get Ready With Me

## Relatable Video for Young Adults

- GRWM: Young patient preparing for a doctor visit at MSK.
- Shows easy booking, quick check-in, and comfort knowing they're in expert hands.
- Ends with promise of an update & keeps audience engaged.

**Tone:** Friendly, casual, reassuring & built for ages 18–39.

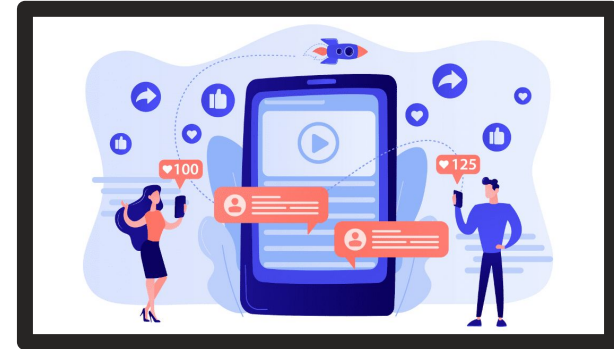
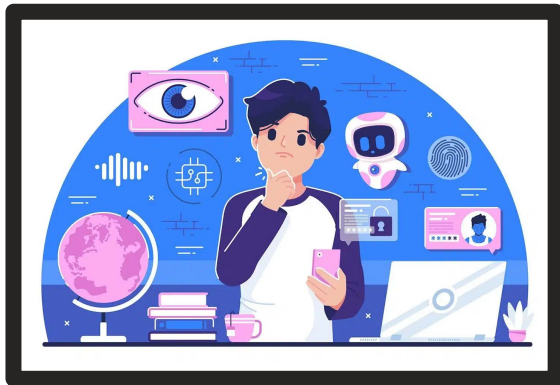
**Goal:** Remove fear, make the first step feel simple, and humanize the care process. [grwm demo video](#)



# To beat the algorithms we have to understand it

## How the algorithms work

- User Interactions are Crucial
- Relationship History Matters – it learns
- Content is analyzed by (watch time /complete rate )



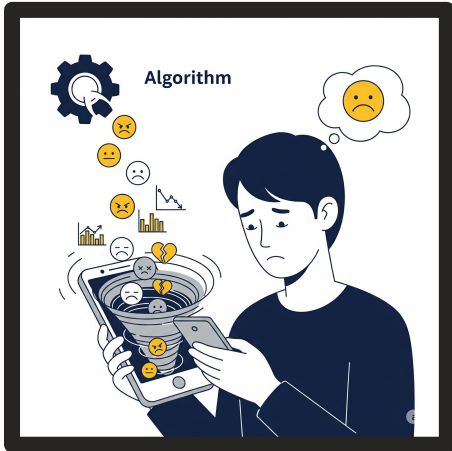
## The Problem with This Model – away to sneak into the system

- Actions Over Words
- Provocative Content Wins – The more engaging the more likes

# Hacking the System for Good

## How to beat the system

- Fragmented Attention Span(15 - 60 sec)
- Distorted Memory – Overwhelmed information
- Hooks Without Context – You are already in
- Know your audience – The right format



**5 Million follower in less than 6 month!!**

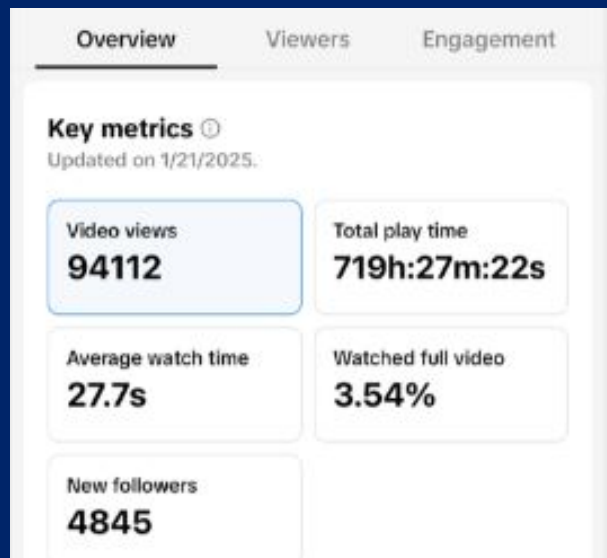
## Doom Scrolling

Seek out content that validates our feelings

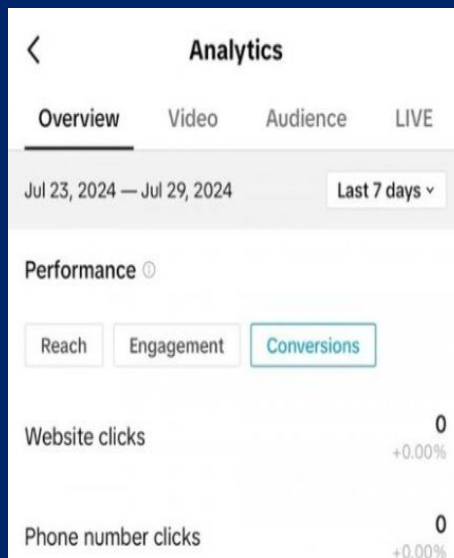


# Measuring Growth & Success

## Engagement #



## # of Website Clicks



## Interaction with Content



# Supporting & Retaining

# Retaining and Supporting Users

Through creating a platform to connect AYAs with MSK resources

## Existing Resources:

- [AYA support resources](#)
  - The lounge app
- [Patient experience articles](#)
- [Cycle for Survival](#)

## Goals:

- Need to retain these users who visit the website
- Bring more traction onto platforms and resources that MSK provides

## Solution:

- Creating a platform for MSK resources catered towards AYAs

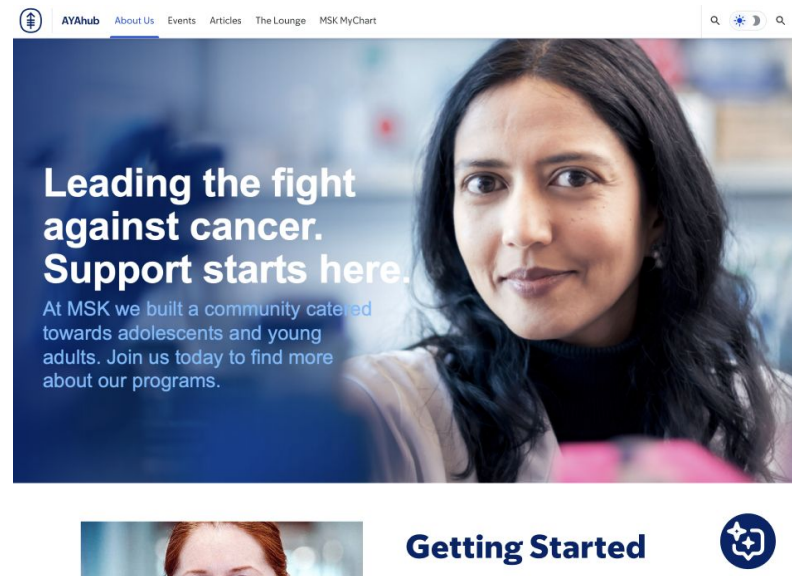


# AYAhub

A central hub for all MSK resources for AYAs

## Contents:

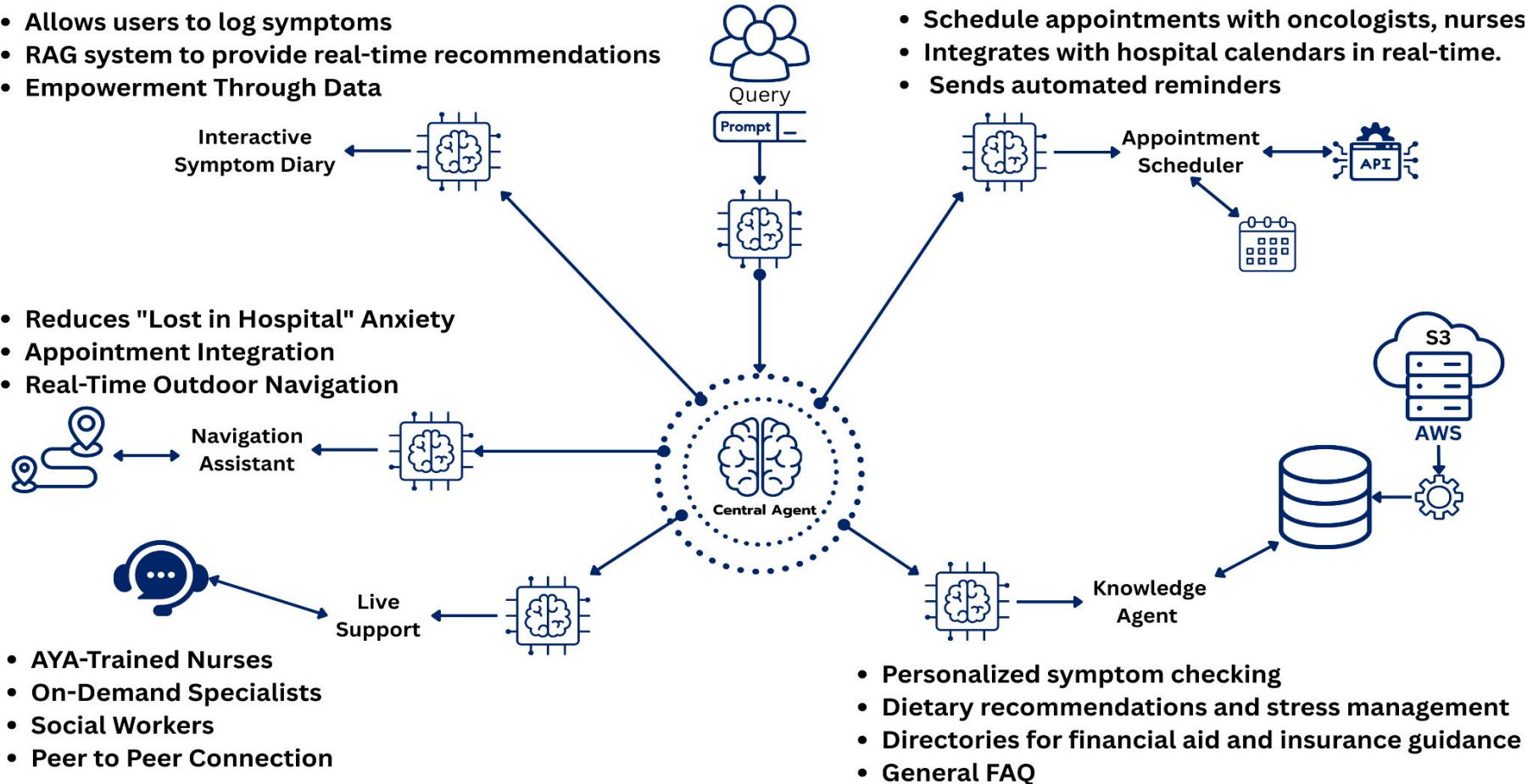
- Articles and resources
  - Referring users to existing resources
- Survey
  - Refining our resources and website through user feedback
- Chatbot
  - Supporting users through guiding their process through the various resources and platform within MSK



# Agentic Chatbot

- Allows users to log symptoms
- RAG system to provide real-time recommendations
- Empowerment Through Data

- Schedule appointments with oncologists, nurses
- Integrates with hospital calendars in real-time.
- Sends automated reminders



# Tools & Technology Stack

- ❖ Cloud Infrastructure (Amazon Web Service)
  - EC2 to host website and backend services
  - S3 to securely store the knowledge base and PHI data
  - RDS for PostgreSQL for structured data
  - Lambda for serverless function
  - HealthLake : FHIR-compliant health data management
- ❖ Backend & AI
  - Flask/Django: For API development
  - Langchain: For RAG pipeline (Pinecone Vector DB)
  - EPIC FHIR API: EHR integration
  - Twilio: Secure SMS/chat
- ❖ Frontend
  - Next JS
  - Mapbox: Interactive hospital navigation



# Measuring Web Page Performance

- **Google Analytics:** tracks and reports website and mobile app traffic
- **Use Cases:**
  - Identify traffic sources (e.g., social media ads) and user demographics
  - Monitor interactions with chatbot, articles, videos, and other resources
  - Measure actions like appointment bookings & support sign-ups
  - Use data for A/B testing and content optimization

# Integration with the current MSK system

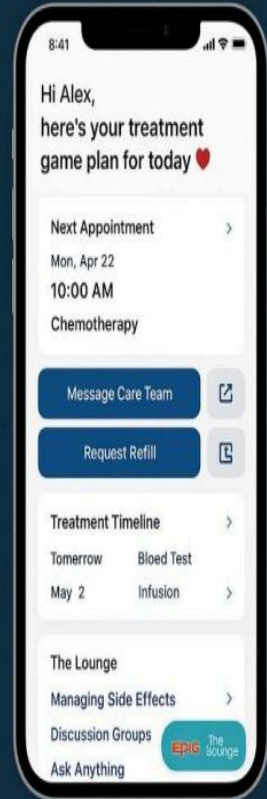
## “Why the AYA Companion Layer?”

- **Gap Today:** MyChart & The Lounge are functional but not tailored to 18–49-year-old cancer patients.
- **Challenges:** Confusion navigating care, lack of personalization, minimal emotional support.
- **Impact:** Delays in starting treatment, frustration, and patient drop-off.

**To bridge the gap between existing hospital tools and what young adult patients actually need**

## Companion Layer: Bridging MyChart & The Lounge for Seamless Patient Support

*One unified patient experience, powered by  
Epic's APIs & MSK's community engagement tools*



## **Solution: AYA Companion Layer**

**Integrate a personalized, emotionally supportive layer on top of existing tools to remove barriers from diagnosis to treatment. “Seamless, Supportive, and leads to enhancement of MyChart + The Lounge through seamless integration.**

- **Type: Progressive Web App (PWA) integrating with MyChart & The Lounge via Epic FHIR/HL7 APIs.**
- **Integration: Real-time sync with Epic via FHIR & HL7 APIs — no duplicate work for staff.**
- **Features:**
  - **Personalized treatment dashboard.**
  - **One-tap care onboarding with forms, prep, and education.**
  - **Emotional support hub with peer stories & navigator chat.**
  - **Real-time sync with hospital systems.**
- **Why It Works: Enhances not replaces current tools for a familiar yet transformed patient experience.**

# Impact

- **Expected Outcomes:**

- **Clear guidance:** Removes confusion with step-by-step instructions.
- **Built-in support:** Replaces isolation with connection to navigators & peers.
- **Faster treatment:** Reduce start time from 14 days → 5 days.
- **Retention:** Expected +20% increase in patients completing treatment.
- **Satisfaction:** Anticipated +15% improvement in patient experience scores.

- **Strategic Fit:** Aligns with the hospital's goal to be the first choice for cancer care especially for younger, tech-savvy patients.

- **Long-Term Vision:** One seamless, emotionally supportive digital journey for all patients.

# Visual Dashboard Mockups

## AYA Cancer Journey Navigator — Mockups

Blended hospital branding + MSK blue palette. Mobile-first, plain-language, supportive.

Onboarding Wizard

Roadmap

AYA Lounge

Symptom Tracker

Milestone

### Welcome, Sarah — Here's Your Next Step

We'll guide you through your first week. You've got this. ❤️



#### Blood Test

Tue • 9:00 AM • Building B

Directions



What to bring: ID, insurance card, lab form



#### Meet Your Care Team

Wed • 2:00 PM • Oncology 3F

Intro Video

Learn what to expect at your first visit and how your navigator supports you.



#### Your First Treatment

Fri • 8:30 AM • Infusion Center

What to Expect

Checklist: Hydrate, comfy clothes, headphones. We'll celebrate your first milestone after.

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### Your Care Roadmap

Simple steps, one at a time.



#### Diagnosis Confirmed

Pathology reviewed. Time to plan next steps.

Plain language

Checklist

Ask a nurse



#### Cycle 1 — Preparation

Hydration, meds checklist, arrive 15 min early.

Plain language

Checklist

Ask a nurse



#### Cycle 1 — Infusion Day

Bring snacks, music, warm layers.

Plain language

Checklist

Ask a nurse



#### Follow-up Visit

Review symptoms, adjust plan if needed.

Plain language

Checklist

Ask a nurse



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### AYA Lounge

Drop in, connect, and feel supported.



#### Talk to a Peer Mentor

Live now • Avg wait: 2 min

Join

You'll be matched by age, diagnosis, and language.



#### Group Spaces

Topics curated for you

#Managing Side Effects

#Nutrition & Energy

#Mental Health

#Work & School



#### Stories from Survivors

Short 90s clips

Video 1

Video 2

Video 3

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### How are you feeling today?

Your care team sees trends, not individual entries unless you ask.



Great



Good



Ok



Low



#### Today's Symptoms

Tap what applies

Fatigue

Nausea

Pain

Sleep

Appetite

Anxiety



#### Suggested Tips

Because you marked Fatigue

Short walk + hydrate. Consider small frequent meals. Want to talk? → [Message navigator](#)



#### Reminders

Today

- Take anti-nausea med at 6 PM
- Pack infusion bag tonight

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### Cycle 3 Complete!

You're doing great. Two more to go — we're with you every step. ❤️

Overall progress

See what's next

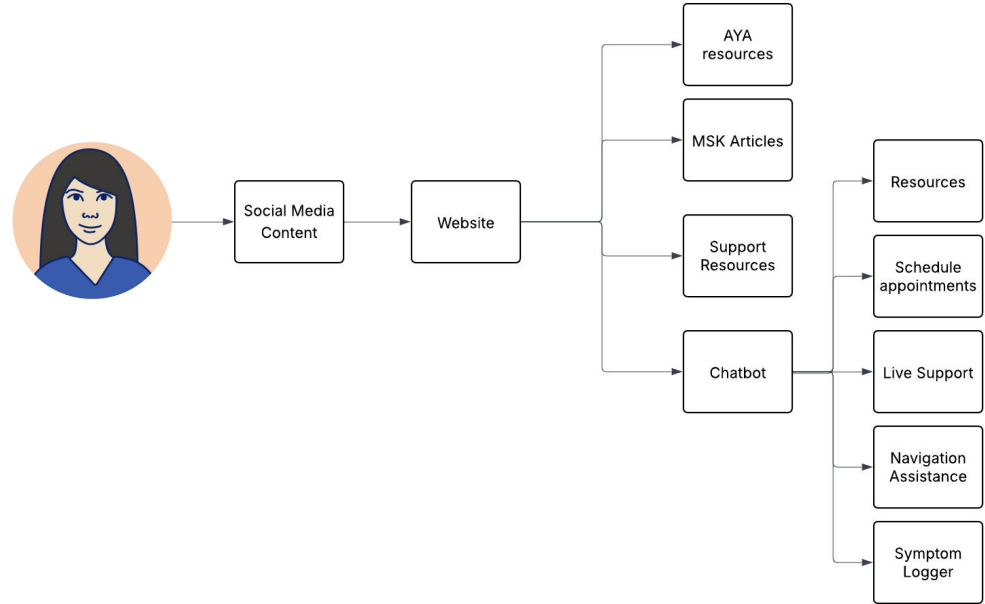
Save badge

# Summary

## Overview of the User Flow Diagram of our Solution

### Our Solution:

- **Attracting and Supporting**
  - **New patients or those at risk**
  - **Outreach and Content**
- **Retain and Encouragement**
  - **Encourage patients to choose and stick with MSK for treatment**
  - **Website**



# Thank You!