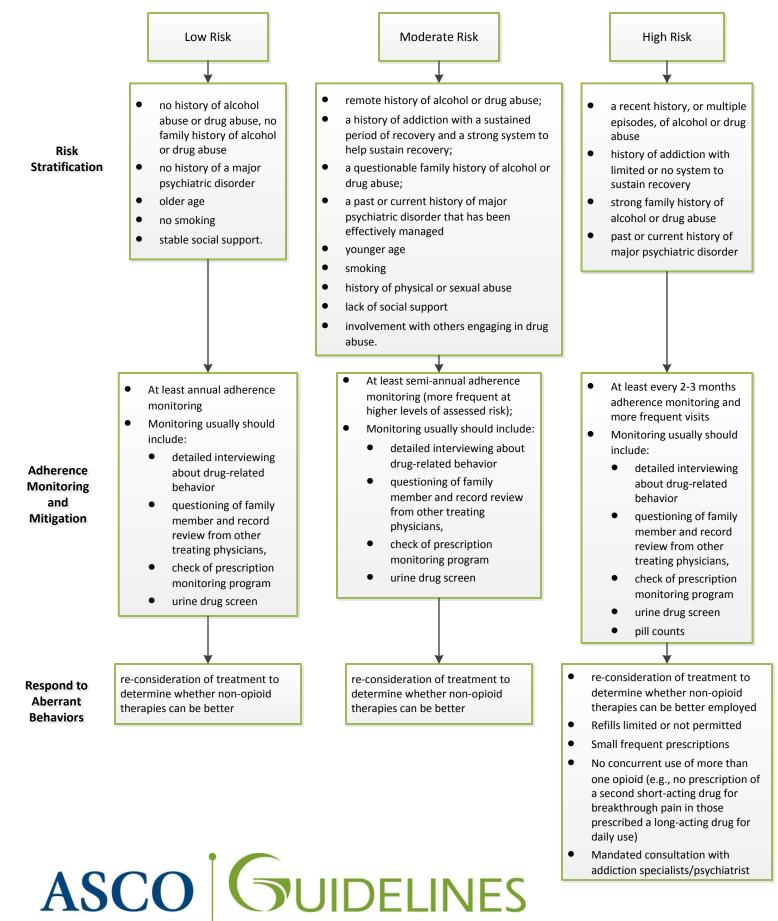
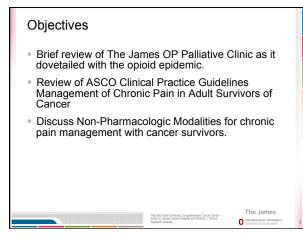
	Synthesis Table	e Integrative M	odalities		
Article Lyman, et al., 2018, SICO CPG, JCO, 36(25), 2647-2655 (A)=high certainty net benefit-substantial; (B)=high to moderate certainty net benefit-moderate to substantial; (C)=selectively offer or provide based on clinical judgment or patient preference	Exercise	Acupuncture Acupuncture reduce anxiety, mood disturbanc, depression, fatigue, pain, QOL (C)	Massage Massage reduce anxiety (C), mood disturbanc (B)	Yoga Yoga reduce anxiety, mood disturbance, depression, QOL (B), fatigue, sleep (C)	Music Music Therapy reduce anxiety, mood disturbanc (B), pain (C)
Mustian, et al., 2012, Ex Recom, Oncol Hematol Rev, 8(2):81–8	Mod intense aerobic (55-75%MHR or RPE11- 14) 10-90m 3-7d/wk; Mod intense resist ex (3d/wk progress to 2-4 sets of 8-15 reps), include stretching; Mindful based (Tai Chi) improve QOL, sleep, reduce stress, improve mm strength, improved cognitive function				
Paice, et al., 2016, ASCO CPG, JCO, 34(27), 3325-3347 (MA=meta- analysis,SR=systematic review)	Ex & PT improved pain small significant; improve physical function; rec moderate	improved pain (2MA, 3SR) benefits	Massage improved pain (2MA, 3SR); benefits outweigh harm; rec weak		Music pain improve weak; benefit outweighs harm, rec weak
Peppone, et al., 2015, Breast Cancer Res Treat, 150, 597- 604,(YOCAS®) BrstCA AI(95) TAM(72) R StdCare vs Std Care w 4wk yoga2x/wk/75m (207-2010)				(breathing, 18 gentle Hatha & restorative postures, meditation) reduce general pain, muscle aches & physical discomfort (measure URCC SI, FACIT-F, MFSI-FS)	
Mustian, et al., 2013, J Clin Onco 31:3233-3241(YOCAS®)	I			410 brst ca survivors; improved sleep quality, (measure PSQI)	
Hershman, et al., 2018, JAMA, 320(2), 167-176 (11 acad centers R true acupuncture-110; Sham Acup-59; waitlist control-57)		Post-men women, early Brest Ca, Al arthralgias; 6 & 12 wk BPI-WP score reduced 2 points (av pain) true acupuncture; 1.07 points sham; .99 points waitlist; true vs sham (95%CI, 0.20-1.65; P = .01); True vs waitlist (95% CI, 0.24-1.67; P = .01)			
Shin, et al., 2016, Cochrane		.,	Massage with or without aromatherapy 19 studies, total 1274 participants, very low quality evidence reduce pain, anxiety, improve QOL; uncertain to high risk of bias		

Opioid Risk Stratification and Adherence Monitoring



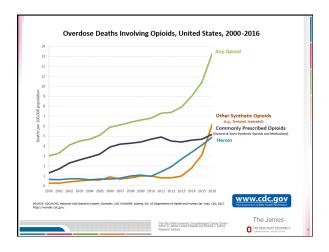


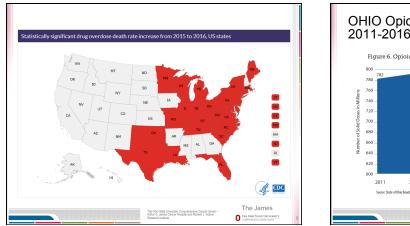


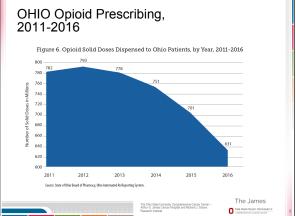
The James OP Palliative Medicine Clinic Conversion in 2005 to Palliative Primarily Pain and Symptom management Advance Directives and Goals of Care 2 Physicians, 2 NPs, 1SW, 1PharmD, 3 RNs, 1PCA, 1Psychologist

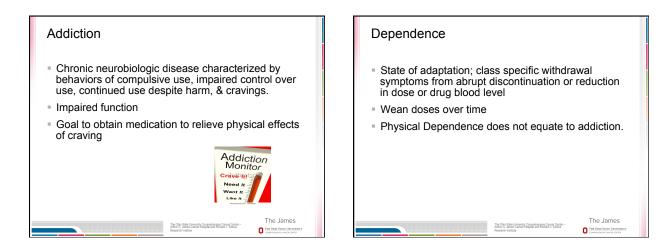
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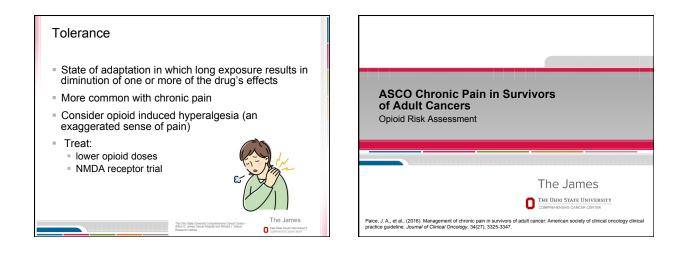
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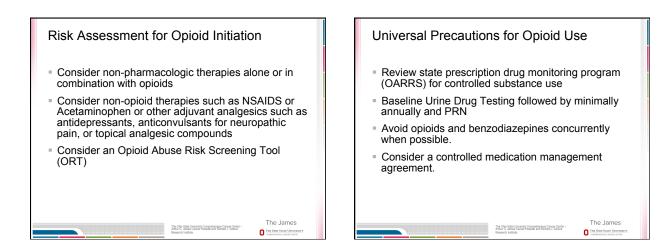




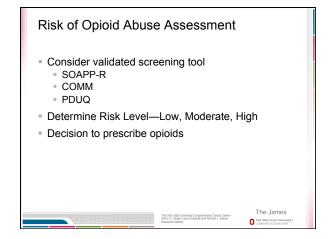


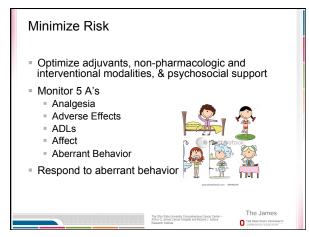


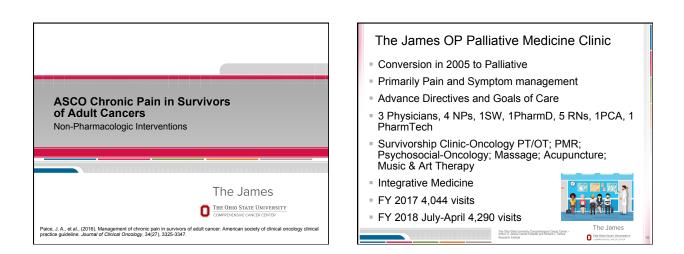


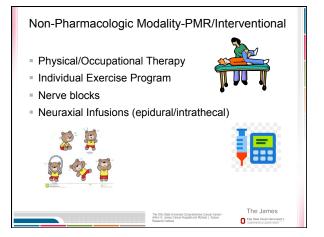


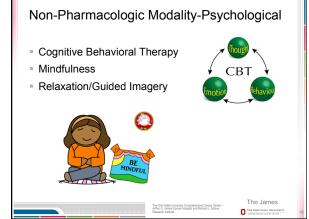
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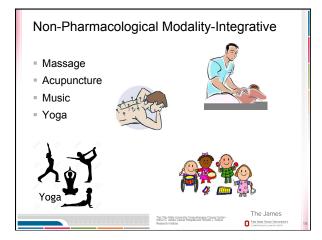








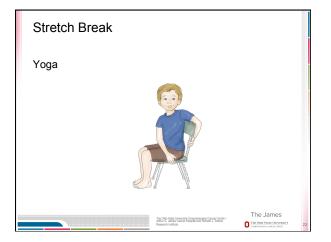


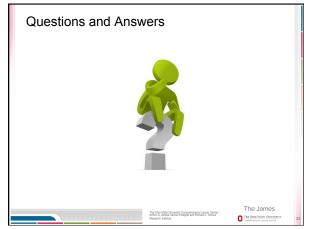


Article	Exercise	Acupuncture	Massage	Yoga	Music
Lyman, et al., 2018, SICO CPG, ICO, 36(25), 2647-2655 (A)=high certainty net benefit-substantial; (B)=high to moderate certainty net benefit- moderate to substantial; (C)=selectively offer or provide based on iclincal judgment or patient preference		Acupuncture reduce anxiety, mood disturbanc, depression, fatigue, pain, QOL (C)	anxiety (C), mood disturbanc (B)	Yoga reduce anxiety, mood disturbance, depression, QQL (B), fatigue, sleep (C)	Music Therapy reduce anxiety, mood disturbanc (B), pain (C)
Paice, et al., 2016, ASCO CPG, JCO, 34(27), 3325-3347 (MA=meta- analysis,SR=systemati c review)	Ex & PT improved pain small significant; improve physical function; rec imoderate	3SR) benefits	Massage improved pain (2MA, 3SR); benefits outweigh harm; rec weak		Music pain improve weak; benefit outweighs harm, rec weak

Synthesis Table					
Article	Exercise	Acupuncture	Massage	Yoga	Music
Ex Recom, Oncol Hematol Rev, 8(2): 81–8	Nod Intense aerobic (55-75%MHR or RPE11-14) 10-90m 3-7d/wk; Mod intense resist ex (3d/ wk progress to 2-4 sets of 8-15 reps), include stretching; Mindful based (Tai Ch) Improve QOL, sleep, reduce stress, improve mm strength, improved cognitive function				
Peppone, et al., 2015, Breast Cancer Res Treat, 150, 597-604,(YOCAS*) BrstCA Al(95) TAM(72) R StdCare vs Std Care w 4wk yoga2x/wk/75m (207-2010)				(breathing, 18 gentle Hatha & restorative postures, meditation) reduce general pain, muscle aches & physical discomfort (measure URCC SI, FACIT-F, MFSI-FS)	
Mustian, et al., 2013, J Clin Oncol 31:3233-3241(YOCAS ^e)				410 brst ca survivors; improved sleep quality, (measure PSQI)	

Synthesis Table					
Article	Exercise	Acupuncture	Massage	Yoga	Music
Hershman, et al., 2018, JAMA, 320(2), 157-176 (11 acad centers, R true acupuncture-110; Sham Acup-59; waitlist control-57)		Post-men women, early Brest Ca, Al arthraigias; 6 & 12 wh BPI-WP score reduced 2 points (av pain) true acupuncture; 1.07 points sham; .99 points waltilist; true vs sham (95%Cl, 0.20-1.65; P = .01); True vs waltilist (95% (, 0.24-1.65; P = .01);			
Shin, et al., 2016, Cochrane			Massage with or without aromatherapy 19 studies, total 1274 participants, very low quality evidence reduce pain, anxiety, improve QOL; uncertain to high risk of bias		
		Arb	Dhio State University Comprehensive r G. James Cancer Hospital and Rich arch Institute	Cancer Center – ard J. Solove	The James





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ASCO GUIDELINES

MANAGEMENT OF CHRONIC PAIN IN SURVIVORS OF ADULT CANCERS: AMERICAN SOCIETY OF CLINICAL ONCOLOGY CLINICAL PRACTICE GUIDELINE					
Clinical Domain	Recommendation	Evidence Rating			
Screening and Comprehensive Assessment	Clinicians should screen for pain at each encounter. Screening should be performed and documented using a quantitative or semi- quantitative tool.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Strong			
	Clinicians should conduct an initial comprehensive pain assessment. This assessment should include an in-depth interview, which explores the multidimensional nature of pain (pain descriptors, associated distress, functional impact and related physical, psychological, social and spiritual factors) and captures information about cancer treatment history and co-morbid conditions, psychosocial and psychiatric history (including substance use), and prior treatments for the pain. The assessment should characterize the pain, clarify its etiology and make inferences about pathophysiology. A physical examination should accompany the history and diagnostic testing should be done when warranted.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			
	Clinicians should be aware of chronic pain syndromes resulting from cancer treatments, their prevalence, risk factors for individual patients, and appropriate treatment options.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			

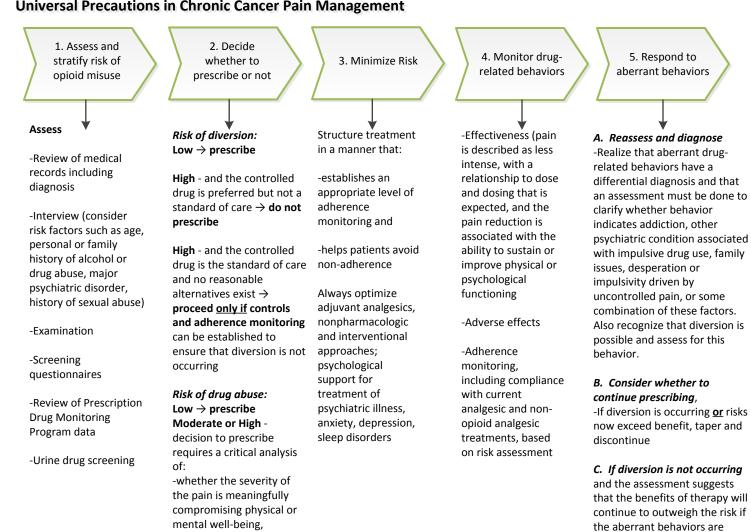
MANAGEMENT OF CHRONIC PAIN IN SURVIVORS OF ADULT CANCERS: AMERICAN SOCIETY OF CLINICAL ONCOLOGY CLINICAL PRACTICE GUIDELINE					
Clinical Domain	Recommendation	Evidence Rating			
	Clinicians should evaluate and monitor for recurrent disease, second malignancy or late onset treatment effects in any patient who reports new onset pain.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			
Treatment and Care Options	Clinicians should aim to enhance comfort, improve function, limit adverse events and ensure safety in the management of pain in cancer survivors.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			
	Clinicians should engage patient and family/caregivers in all aspects of pain assessment and management.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			
	Clinicians should determine the need for other health professionals to provide comprehensive pain management care in patients with complex needs. If deemed necessary, the clinician should define who is responsible for each aspect of care and refer patients accordingly.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			
	Non-Pharmacologic Interventions				
	Clinicians may prescribe directly or refer to other professionals to provide interventions, in disciplines such as physical medicine and rehabilitation, integrative therapies, interventional therapies, psychological approaches, and neurostimulatory, to mitigate chronic pain or improve pain-related outcomes in cancer survivors. The use of these interventions must consider pre-existing diagnoses and comorbidities and should include an assessment for adverse events.	Type: Evidence-based; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate			

MANAGEMENT OF CHRONIC PAIN IN SURVIVORS OF ADULT CANCERS: AMERICAN SOCIETY OF CLINICAL ONCOLOGY CLINICAL PRACTICE GUIDELINE				
Clinical Domain	Recommendation	Evidence Rating		
	Pharmacologic Intervention	ns		
	 Clinicians may prescribe the following systemic non-opioid analgesics, and adjuvant analgesics to relieve chronic pain and/or improve function in cancer survivors where no contraindications exist including serious drug-drug interactions: NSAIDS Acetaminophen (Paracetamol) Adjuvant analgesics, including selected antidepressants and selected anticonvulsants with evidence of analgesic efficacy (such as the antidepressant duloxetine and the anticonvulsants gabapentin and pregabalin) for neuropathic pain conditions or chronic widespread pain 	Type: Evidence-based; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate		
	Clinicians may prescribe topical analgesics (such as commercially available NSAIDS, local anesthetics, or compounded creams/gels containing baclofen, amitriptyline and ketamine), for the management of chronic pain.	Type: Evidence-based; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate		
	Corticosteroids are not recommended for long term use in cancer survivors solely to relieve chronic pain.	Type: Evidence-based; harms outweigh benefits Evidence quality: intermediate Strength of Recommendation: Moderate		
t	Clinicians should assess risks for adverse effects of pharmacologic therapies used for pain management, including non-opioids, adjuvant analgesics and other agents.	Type: Evidence-based and Informal consensus; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate		
	Clinicians may follow specific state regulations that allow access to medical cannabis or cannabinoids for patients with chronic pain after a consideration of the potential benefits and risks of the available formulations.	Type: Evidence-based; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate		

MANAGEMENT OF CHRONIC PAIN IN SURVIVORS OF ADULT CANCERS: AMERICAN SOCIETY OF CLINICAL ONCOLOGY CLINICAL PRACTICE GUIDELINE					
Clinical Domain	Clinical Domain Recommendation				
	Clinicians may prescribe a trial of opioids in carefully selected cancer survivors with chronic pain who do not respond to more conservative management and who continue to experience pain-related distress or functional impairment. Non-opioid analgesics and/or adjuvants can be added as clinically necessary.	Type: Evidence-based; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate			
	Clinicians should assess risks for adverse effects of opioids used for pain management.	Type: Evidence-based and Informal consensus; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate			
Risk Assessment, Mitigation and Universal Precautions with Opioid Use	Clinicians should assess the potential risks and benefits when initiating treatment that will incorporate long term use of opioids.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			
	Clinicians should clearly understand terminology such as tolerance, dependence, abuse and addiction as it relates to the use of opioids for pain control.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			
	Clinicians should incorporate a "universal precautions" approach to minimize abuse, addiction and adverse consequences of opioid use such as opioid-related deaths. Clinicians should be cautious in co- prescribing other centrally-acting drugs, particularly benzodiazepines.	Type: Evidence-based and Informal consensus; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate			
	Clinicians should understand pertinent laws and regulations regarding prescribing controlled substances.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate			

MANAGEMENT OF CHRONIC PAIN IN SURVIVORS OF ADULT CANCERS: AMERICAN SOCIETY OF CLINICAL ONCOLOGY CLINICAL PRACTICE GUIDELINE				
Clinical Domain	Recommendation	Evidence Rating		
	Clinicians should educate patients and family members regarding the risks and benefits of long-term opioid therapy, safe storage, use and disposal of controlled substances. Clinicians are encouraged to address possible myths and misconceptions about medication use and should educate patients about the need to be cautious when using alcohol or sedating over-the-counter medications, or in taking centrally-acting medications from other physicians.	Type: Informal consensus; benefits outweigh harms Evidence quality: Insufficient Strength of Recommendation: Moderate		
	If opioids are no longer warranted, clinicians should taper the dose to avoid abstinence syndrome. The rate of tapering and use of co- therapies to reduce adverse effects should be individualized for each patient.	Type: Evidence-based and Informal consensus; benefits outweigh harms Evidence quality: Intermediate Strength of Recommendation: Moderate		

Universal Precautions in Chronic Cancer Pain Management



-whether there are reasonable alternatives that may ameliorate pain with manageable risk, and

-whether the nature of the drug abuse risk is more (e.g. relapse of heroin abuse) or less (e.g., pattern of early refills) serious

-Avoid agents with higher abuse liability

prescribing to increase control

and adherence monitoring

-Prescribe small amounts at short intervals

stopped, restructure

-Review prescription drug monitoring data routinely

-Employ pill counts

-Monitor use of substances through urine/other toxicology screening

-Require use of one pharmacy

-Use written agreement

-Obtain consultation from psychiatry/addiction specialists

Adapted from Portenoy RK and Ahmed E, Principles of Opioid use in cancer pain. 2014; 32(16):1662-1670 and Portenoy et al 2011 Lancet 377:2236-2247.

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