ADVANCED PRACTICE PROVIDER (APP) ONBOARDING AND PRACTICE GUIDE

October 2020

AMERICAN SOCIETY OF CLINICAL ONCOLOGY

KNOWLEDGE CONQUERS CANCER

Introduction

The purpose of this document is to provide a framework for the onboarding process of advanced practice providers (APPs) in oncology and to provide a supplement to support the comprehensive integration of new APP team members into team-based oncology, practice at the top of license, and with support of physician and APP mentors.

This resource was developed by members of the ASCO Clinical Practice Committee's APP Task Force. The examples included in this document are examples that are used and shared by the Task Force members. This resource is meant to be a supplement to your existing onboarding processes and is specific to oncology APPs.

Best Practice Statements/Onboarding Principles

A. Onboarding: The APP entering oncology practice should have an onboarding process and commitment from the practice to ensure they obtain the necessary medical knowledge, patient care knowledge, understand workflows, team members, roles, responsibilities, medical procedures and national guidelines, which enables the APP to assume care of the oncology patient in a team-based care model.

B. Scope of Practice: The APP providing care in oncology should work at the top of their license with full scope of practice in accordance with state requirements. Team-based practice in oncology requires each healthcare provider to practice at the fullest scope to enhance patient safety and quality of care.

C. Role of Physician Mentor(s) and APP Mentor(s): The role of a mentor in a team-based oncology model is to share best practices, collaborate in patient care, and serve as a mentor for the new APP team members. This role is critical in the successful formation of teams and relies on the mentors' commitment to support APPs in team-based oncology practice.

D. Special Considerations:
   a. APP Practice Variability: Please be aware of the following:
      i. APP practice varies by state practice environments; there is variability in state rules and regulations regarding the scope of practice of APPs that may impact requirements for physician supervision and/or collaboration, and may place limitations on prescriptive authority, etc.
      ii. There is variability of the APPs role and scope of practice in individual institutions/facilities that use credentialing/privileging processes, due to bylaws and policy
      iii. There is variability in billing and reimbursement based on payer/contractor negotiations
   b. Additional resources/summaries:
      i. Refer to your individual practicing state's regulatory boards; resources below also include individual state information
      ii. American Association of Nurse Practitioners (AANP)
      iii. The American Academy of Physicians Assistants (AAPA)

E. Onboarding Checklist:

The onboarding process allows the new employee to acquire the necessary knowledge and skills to become effective organizational members. Some critical items may include, but are not limited to are:

a. Human resources information
b. Practice and required training
c. Safety, policy and quality items
d. Credentialing/privileging enrollment or verification

Checklist Example 1
Checklist Example 2

F. Position Description:

An APP position description outlines the necessary requirements of the position, which could include, but is not limited to:

a. Description of the role and key functions of the APP
    i. Position Description Example 1
b. Competencies required for the role
c. Descriptions(s) of reporting relationships to other members of the team, and any responsibility for the management or direction of other team members
d. Identification of any physical requirements of the role, and the expected work hours, call or hospital duties

G. Orientation Manual:

The orientation phase for an APP is the introductory stage of onboarding that imparts the most fundamental information the new employee needs at the initial stages of employment. The orientation manual may include, but is not limited to:

a. Schedule: APPs need 3 to 6 months general training to become functional in oncology practice
    i. Schedule Example 1
b. Required Training: what procedures or technical skill are needed
c. Medical Knowledge: disease specific and national guidelines
d. Patient Care: protocols, algorithms, panels, pathways, workflows
    i. Patient Care Protocol Example 1
e. Practice-Based Improvement: quality and safety knowledge/workflows
f. System-Based Practice: knowledge of reimbursement, metrics and productivity, financial clearance, peer to peer, care coordination
g. Professional Evaluation: description of key functions and how/when assessment will take place; description of successful practice/competency/behavior
    i. Professional Evaluation Example 1
h. Resources: list of practice phone numbers, key individuals, locations, meeting schedules
i. Provider Wellness: strategies to promote provider wellness (internal resources and external resources), knowledge of risk factors for burnout, including mitigation strategies for burnout
j. Practice models: types and varieties of practice models; knowledge of how practice models affect the ratio of physicians to APPs

Websites, Journal Articles, and Educational Resources

1. The American Academy of Physicians Assistants (AAPA)
2. The American Association of Nurse Practitioners (AANP)
3. Advanced Practitioners Society of Hematology and Oncology (APSHO)
   - APSHO Mentoring Program
   - Journal of the Advanced Practitioner in Oncology (JADPRO)
4. The Association of Physicians Assistants in Oncology (APAO)
5. The American Society of Clinical Oncology's Advanced Practitioner Certificate Program in Oncology (ASCO)
   - Team-Based Care in Oncology Practice e-Learning Course
6. Oncology Nursing Society (ONS)
   - Nurse Practitioner competencies
   - Post Masters Foundation Course
   - Clinical Manual for the Oncology Advanced Practice Nurse (3rd Edition)
   - Optimizing the Management of Cancer Treatments for the Advanced Practice Provider
   - Essentials in Oncologic Emergencies for the Advanced Practice Provider
   - ONS's AOCNP® Certification Review Bundle
   - Advanced Oncology Nursing Certification Review and Resource Manual (Second Edition)
   - Lubejko, B.G., & Wilson, B.J. (2019). Oncology nursing: Scope and standards of practice. Pittsburgh, PA: Oncology Nursing Society.
7. Oncology Nursing Certification Corporation (ONCC)
   - ONCC's Advanced Oncology Certified Nurse Practitioner (AOCNP®)
   - Advanced Oncology Certified Clinical Nurse Specialist (AOCNS®)*
   - ONCC's 2014 "A Role Delineation Study of the Advanced Oncology Certified Nurse Practitioner"
8. University of Pittsburgh's AP Power - Advanced Practice Provider Oncology Web Education Resource
9. ASCO Educational Book: Clinical Oncology Practice 2015: Preparing for the Future
   - Authors: Michael P. Kosty, MD, FACP, FASCO, Anupama Kurup Acheson, MD, Eric Teztlaff, PA-C (2019).
   - American Society of Clinical Oncology Educational Book 35 (October 29, 2019)
   - DOI: 10.14694/EdBook_AM.2015.35.e622
10. ASCO Educational Book: Oncology Advanced Practitioners Bring Advanced Community Oncology Care
    - Author: Wendy H. Vogel, MSN, FNP, AOCNP (2018).
    - American Society of Clinical Oncology Educational Book 36 (October 29, 2018)
    - DOI: 10.1200/EDBK_158751
11. ASCO Educational Book: Collaborating with Advanced Practice Providers: Impact and Opportunity
    - Authors: Heather M. Hylton, MS, PA-C, DFAAPA and G. Lita Smith, DNP, RN, ACNP-C (2018).
    - American Society of Clinical Oncology Educational Book 37 (October 29, 2018)
    - DOI: 10.1200/EDBK_175654
12. ASCO Journal of Oncology Practice: Advanced Practice Providers and Survivorship Care: They Can Deliver.
    - Authors: Bridgette Thom, MS, Annelies H. Boekhout, PhD, RN, Stacie Corcoran, RN, Roberto Adsuar, MD, Kevin C. Oeffinger, MD, and Mary S. McCabe, RN (2018)
    - Journal of Oncology Practice 15, no. 3 (March 02, 2019). Published online January 07, 2019.

- DOI: 10.1200/JOP.18.00359

13. ASCO Journal of Oncology Practice: Understanding the Role of Advanced Practice Providers in Oncology in the United States
    - Authors: Suanna S. Bruinooge, Todd A. Pickard, Wendy Vogel, Amy Hanley, Caroline Schenkel, Elizabeth Garrett-Mayer, Eric Tetzlaff, Margaret Rosenzweig, Heather Hylton, Shannon N. Westin, Noël Smith, Conor Lynch, Michael P. Kosty and Stephanie F. Williams (2018).
    - Journal of Oncology Practice 14, no. 9 (September 01, 2018). Published online August 22, 2018.
    - DOI: 10.1200/JOP.18.00181
14. ASCO Journal of Oncology Practice: Reviewing Cancer Care Team Effectiveness
    - Authors: Stephen H. Taplin, MD, MPH, Sallie Weaver, PhD, Eduardo Salas, PhD, Veronica Chollette, RN, MSc, Heather M. Edwards, PhD, MPH, Suanna S. Bruinooge, Michael P. Kosty, MD (2015).
    - Journal of Oncology Practice 11, no. 3 (May 01, 2015). Published online April 14, 2015.
    - DOI: 10.1200/JOP.2014.003350
15. ASCO Journal of Oncology Practice: Special Series: NCI-ASCO Teams
    - Journal of Oncology Practice 12, no. 11 (November 1, 2016).
16. ASCO Journal of Oncology Practice: Results of the ASCO Study of Collaborative Practice Arrangements
    - Authors: Elaine L. Towle, CMPE, Thomas R. Barr, MBA, Amy Hanley, Michael Kosty, MD, Stephanie Williams, MD, Michael A. Goldstein, MD (2011).
    - Journal of Oncology Practice 7, no. 5 (September 01, 2011). Published online September 21, 2016.
    - DOI: 10.1200/JOP.2011.000385
17. ASCO Journal of Clinical Oncology: The Study of Collaborative Practice Arrangements: Where Do We Go From Here?
    - Authors: Dean, F. Bajorin, Amy Hanley (2011).
    - Journal of Clinical Oncology 29, no. 27 (September 20, 2011). Published online August 22, 2011.
    - DOI: 10.1200/JCO.2011.38.3695
18. ACCC: Bridging the Oncology Practice Gap
    - Author: Monica Key, DNP, BSB-M, ANP-C, APRN, AOCNP (2019).
    - Association of Community Cancer Centers, January-February 2019
19. Journal of the American Geriatrics Society: Nurse Practitioners and Physician Assistants: An Underestimated Workforce for Older Adults with Cancer
    - Authors: Lorinda A. Coombs, PhD, FNP-BC, Wendy Max, PhD, Tatjana Kolevska, MD, Chris Tonner, MPH and Caroline Stephens, PhD (2019).
    - Journal of the American Geriatrics Society 67, no. 7 (July 2019).
    - DOI: 10.1111/jgs.15931
20. Oncology Nursing Forum: Bridging the gap: A Descriptive Study of Knowledge and Skill Needs in the First Year of Oncology Nurse Practitioner Practice
    - Authors: Margaret Rosenzweig, Joan Giblin, Marsha Mickle, Allison Morse, Patricia Sheehy, Valerie Sommer (2012).
    - Oncology Nursing Forum. 39, 2.
    - DOI: 10.1188/12.ONF.195-201
21. Clinical Journal of Oncology Nursing: Oncology Nurse Practitioner Role: Recommendations From the Oncology Nursing Society's Nurse Practitioner Summit
    - Authors: Heather Mackey, Kimberly Noonan, Lisa Kennedy Sheldon, Marybeth Singer, Tamika Turner (2018).

- Clinical Journal of Oncology Nursing. 22, 5
- DOI: 10.1188/18.CJON.516-522

22. Assessment of the Need for a Hematology-Specific Fellowship Curriculum for Advanced Practice Providers Using a Needs-Based Survey
    - Authors: Yi L. Hwa, Ariela L. Marshall, Jessica L. Shelly, Lisa K. Colborn, Grzegorz S. Nowakowski, and Martha Q. Lacy (2019).
    - Journal of Oncology Practice 2019 15:7, e593-e599
    - DOI: 10.1200/JOP.18.00697
23. Filling the Gap: A Post Graduate Fellowship in Oncology Nursing
    - Authors: Dains, Joyce E. DrPH, JD, RN, FNP-BC, FAANP; Summers, Barbara L. PhD, RN, FAAN (2015).
    - The Journal of Nursing Administration. 2015 45:3
    - DOI: 10.1097/NNA.0000000000000177
24. Creating Quality Online Materials for Specialty Nurse Practitioner Content: Filling a Need for the Graduate Nurse Practitioner
    - Authors: Hoffmann, R., Klein, S., Rosenzweig, M., Hoffmann, R. L., Klein, S. J., & Rosenzweig, M.Q. (2017).
    - Journal of Cancer Education, 32(3), 522-527
    - DOI:10.1007/s13187-015-0980-3
25. Nurse Practitioner Fellowship
    - Authors: Alencar, Maritza, Butler, E, MacIntyre, J. et al (2018).
    - Clinical Journal of Oncology Nursing. 22, 2. 142-145.

Glossary

Advanced Practice Providers – Physician Assistants (PAs) and Advanced Practitioner Registered Nurse (APRNs)

Onboarding – the process through which new employees acquire the necessary knowledge, skills, and behaviors in order to become effective organizational members; this process is critical to the successful integration of new employees into teams

Orientation – the introductory stage of onboarding that imparts the most fundamental information the new employee needs at the initial stages of employment such as hours of operations, locations, staff member introductions, organizational structure, basics of compensation and benefits.

Scope of Practice – the activities that an individual **health care** practitioner is permitted to perform within a specific profession; defines the roles that a member of the team may legally perform

Credentialing – the process used for primary source verification of academic credentials, licensure, certification, prior work history, medical malpractice liability, national database reporting, competency assessment from previous collaborating physicians, and peer references.

Privileging – the process of evaluating the competency, skills, certification, and experience that support the granting of specific patient care duties and permission to perform procedures within an institution or practice.

Back to Top

ASCO®
AMERICAN SOCIETY OF CLINICAL ONCOLOGY

ONBOARDING CHECKLIST EXAMPLES

Back to Top

Advanced Practice Provider New Employee Checklist

EMPLOYEE INFORMATION

Employee Name:		Manager:	
Employee Signature:		Manager Signature:	
Completion Date:		Approval Date:	

FIRST DAY

- ☐ Provide employee with APP Orientation Manual.
- ☐ Provide employee with Department Specific Orientation Manual, if applicable.
- ☐ Assign preceptors and review orientation schedule.
- ☐ Assign HR training: HIPAA, Employment Laws and Practices, EEE, Orientation Learning Modules in the Education Center.
- ☐ Schedule Billing Compliance Education.
- ☐ Assign Instructor Led New Hire Institutional APP Orientation. Classes available in the Education Center.
- ☐ Assign Provider Orientation
- ☐ Assign Human Subject Protection Training

POSITION

- ☐ Review Job and Position Descriptions. Obtain a signed and dated Position Description for the new employee file.
- ☐ Review Key Functions, Team Assignment, Work Schedule and Expectations.
- ☐ Review Organizational Structure: Division, Department, Section, Teams.
- ☐ Review Clinical Operations, Personnel, Standard Operating Procedures.

INTRODUCTIONS AND TOURS

- ☐ Give introductions to department staff and key personnel during tour.
- ☐ Facilitate meeting with physicians and teams.
- ☐ Tour of facility, including:
  - Cafeteria
  - Clinic
  - Coffee/vending machines
  - Conference Spaces
  - Copy centers
  - Emergency exits/supplies
  - Fax machines
  - Infusion Area
  - Inpatient Unit
  - Kitchen
  - Mail rooms
  - Medical Library
  - OR/Procedure Area
  - Parking
  - Pharmacy
  - Printers
  - Restrooms
  - Supply room

ADMINISTRATIVE PROCEDURES

- ☐ Review general administrative procedures.
  - Business cards
  - Conference rooms
  - Department SharePoint Site
  - Expense reports CONCUR
  - Keys
  - Lab Coats/Scrubs
  - Library and Medical Graphics
  - Mail (incoming and outgoing)
  - Mobile Device/Paging
  - Office supplies
  - Office/desk/work station
  - Picture ID badges
  - PTAS Reporting
  - Purchase requests
  - Remote Access ISARP
  - TALEO Performance and Learning
  - Telephones
  - Time Off Request Process

Back to Top

EHR

☐ Provide information and ensure training is completed, including:

- Billing
- Closing Encounter
- Documentation/Dragon
- In-Basket
- Med Reconciliation
- One Connect Overview
- Orders
- Physician Attestation
- Prescriptions
- Rooming Process
- Routing
- Signing

CREDENTIALING AND PRIVILEGING

☐ Review role of Medical Staff Office.
☐ Review Credentialing and Privileging.
☐ Ensure completion of Credentialing and Privileging Application.
☐ Ensure completion of Provider Enrollment Application for billing, NPI, and Medicare.
☐ Ensure completion of TMB registration for all physicians.
☐ Assist with obtaining DEA registration. (Schedule 2 – 5)
☐ Ensure CPR either BLS or ACLS is current.
☐ Review DPA Protocol and ensure new employee is added.
☐ Identify procedure training needs and follow training protocols.
☐ Identify proctor for FPPE and complete reports as required.

EDUCATION CENTER TRAINING

☐ Provide information and ensure training is completed, including:

"A Guide to Managing Cancer Pain"
"Recognition and Management of Transfusion Reactions"
"Blood Component Transfusion Informed Consent and Orders"
"Provider: Suicide Risk Assessment and Policy Changes"

POLICIES

☐ Review key policies.

- APP Fair Hearing
- APRN/PA Policy
- Blood Component & Transfusion Reaction
- Chemotherapy
- Confidentiality
- Conflict of Interest
- Delegated Prescriptive Authority
- Corrective Action
- Dress code
- E-mail and Internet use
- Emergency procedures
- Environmental Safety
- FMLA/leaves of absence
- FPPE/OPPE
- Grievances
- Holidays
- Medical Abbreviations
- Medical Record
- Medical Staff Bylaws
- Medication Orders
- Patient Safety Event Reporting
- Performance Management
- Personal Conduct
- Security
- Suicide Risk & Identification
- Stop the Line
- Time and Attendance
- Universal Protocol
- Vacation and sick leave
- Visitors

MEETINGS

☐ Review general information and schedules.

- APRN/PA Monthly Meeting
- APRN Education Meeting
- Departmental M&M
- Department Staff Meeting
- Fellows Lecture Series
- Grand Rounds
- PA PACE Meeting

RESOURCES AND BENEFITS

☐ Review key resources.

- APP PDM
- APRN Website
- Clinic Portal
- Compliance Website
- Education Center
- Education Leave – 5 days
- Employee Assistance Program
- Employee Health
- HR
- Medical Staff Office
- Merit Pay Program
- NCAP Funds
- Ombudsman Office
- PA Website
- Parking Office
- PRS Funds & Website

EMERGENCIES AND SAFETY

☐ Review key resources.

- 2-RING
- 2-STOP
- Code Team 2-7099
- EC 2-3722
- Emergency Plan
- Employee Accidents
- Facilities
- Fire/Spills
- Infection Control
- JC Readiness
- MSDS Online
- MERIT Team 6-2640
- Patient/Visitor Accidents
- Radiation Safety
- Respiratory Fit Testing
- Ride Out Teams
- Transfer Center 3-2222
- UHC Safety Reporting

Practice

Effective Date:
Revised:

APP Orientation Checklist

Advanced Practice Provider Orientation Checklist

Employee _____

I. Introduction	Date Presented	Date Observed/ Reviewed	Initials	Comments
1. Introduction to office staff/co-workers and their role; tour of office; parking; lunch options; office resources				
2. Workflow of office systems (e.g., clinic roles and responsibilities, patient visit, infusion suite, pharmacy)				
3. Communication (e.g.,huddles, email, voicemail, provider/care team and patient messaging)				
4. APP role in collaboration with other clinical support teams (e.g., outpatient, inpatient, emergency department, radiation oncology, telehealth, laboratory and diagnostic, tumor board)				
5. Documentation of patient care/billing for services (e.g., documentation methods directly in EMR and dictation; utilization of EMR system for documentation				
6. Demonstrates competency in EMR and chemotherapy ordering system. Demonstrates knowledge of treatment plans by diagnosis and understanding of role in subsequent treatment approval				
7. Information Systems log-in information				
8. E-Prescribe and prescription refill policy (e.g., general refills and controlled substance prescriptions after hours and on weekends, if applicable)				
9. In-hospital laboratory services (e.g., complete blood counts, protime/INR, chemistries)				
10. Teaching materials and educational resources				
11. Quality and Performance Improvement (e.g. APP chart audits)				
12. Payer Credentialing/Hospital Privileges administrative support				
13. APP responsibilities - licensure renewal, certification renewal, SCA if applicable, prescriptive				
14. Resources (e.g., SHC APP group)				
15. Standard Care Agreement complete, if applicable				

Back to Top

16. Clinical Trials APP role and responsibilities/training, if applicable				
17. Time off and coverage- review of guidelines (e.g., PTO, appropriate communication, payroll system request, "Out of Office Assistant" in Outlook and EMR (if applicable); notification for blocking of schedule and physician coverage)				
18. APP participation in clinically relevant SHC and SCC meetings				
II. Health Promotion, Health Protection, Disease Prevention, and Treatment	**Date Presented**	**Date Observed/ Reviewed**	**Initials**	**Comments**
1. Obtains and documents a comprehensive health history for patients with a past, current or potential diagnosis of cancer				
2. Uses evidence-based practice guidelines and assessment tools for evaluating patients with a past, current, or potential diagnosis of cancer				
3. Performs a relevant cancer risk assessment for: general populations; at-risk populations; newly diagnosed patients with cancer; cancer survivors				
4. Obtains comprehensive information related to risk, diagnosis, and past experience with cancer				
5. Performs and documents complete, system-focused, symptom specific physical examinations for patients				
6. Performs a physical assessment of patients with cancer that includes a comprehensive review of systems and evaluation of manifestations and toxicities related to cancer and its treatment				
7. Assesses actual or potential late effects of cancer and its treatment (e.g. second malignant neoplasms, cardiomyopathy, pulmonary dysfunction, and other short-term and long-term effects) in cancer survivors				
8. Assesses the impact of physical co morbidities on cancer symptoms and response to treatment				
9. Identifies the relationship between normal physiology and specific systems alterations produced by cancer and cancer treatment				
10. Assesses symptoms commonly seen in patients with cancer (e.g., fatigue, pain, GI upset, immune responses, etc.)				
11. Assesses for common signs and symptoms related to disease progression or recurrence				
12. Assesses patients who are at high risk for signs and symptoms of oncologic emergencies				
13. Performs a comprehensive assessment of nutritional status in patients with a current or past diagnosis of cancer				

Back to Top

14. Conducts a pharmacologic assessment, including over-the-counter medications, prescription drugs, nutritional supplements, and other complementary, alternative, and integrative therapies, to identify and correct any potential interactions with cancer therapeutics				
15. Assesses the risks of polypharmacy to the patient's health				
16. Performs a comprehensive assessment of functional status and the impact on activities of daily living, including but not limited to the following domains: psychological; role; social; cognitive; physical				
17. Assesses for the presence of psychological co morbidities (e.g., anxiety/depression, substance use), past and present coping skills, and the psychosocial impact of the cancer experience				
18. Assesses concerns and issues related to sexual function, sexual well-being, and fertility of patients with a past, current, or potential diagnosis of cancer, including the impact on relationships				
19. Assesses developmental ethnic, spiritual, racial, socioeconomic, and gender variations in symptom presentation or illness experience of patients with cancer				
20. Assesses the roles, tasks, and stressors of individuals, families, and caregivers and their ability to manage the illness experience (e.g., resources, support services, equipment, transportation, child care, anxiety, depression)				
21. Assesses patients' ability to navigate the complex healthcare system and the barriers to continuity, coordination, and communication among multiple care providers				
22. Orders screening, diagnostics, and surveillance examinations or tests				
23. Demonstrates knowledge of technical skills needed to perform diagnostic procedures to confirm or rule out health problems (e.g., bone marrow aspirations)				
24. Performs an initial interpretation of laboratory studies and diagnostic tests				
25. Reviews diagnostic and laboratory study results to confirm or rule out health problems				
26. Demonstrates knowledge of atypical presentations of cancer				
27. Demonstrates understanding of the principles of cancer staging				
28. Collaborates with relevant healthcare team members and gathers additional information for further differential diagnosis and problem				

Back to Top

29. Diagnoses common episodic, acute, and chronic physical problems in patients with a past or current diagnosis of cancer				
30. Diagnoses acute and chronic conditions that may result in rapid physiologic deterioration or life-threatening instability, including oncologic emergencies				
31. Identifies the need for screening for common late effects in cancer survivors (e.g., infertility, cardiomyopathy)				
32. Reformulates diagnoses based on new or additional assessment data				
33. Determines the impact of co morbidities on the prognosis and treatment of patients with cancer				
34. Diagnoses acute and chronic psychological complications (e.g., anxiety, depression, substance abuse) and their influence on the patient's psychological state				
35. Documents diagnoses and problems to facilitate identification and initiation of the treatment plan and outcome evaluation				
36. Demonstrates knowledge of diagnostic and procedural coding documentation requirements				
37. Collaborates with multidisciplinary team, patient, family, and caregivers to formulate a comprehensive plan of care for patients with cancer, including appropriate health education, health promotion and health maintenance, rehabilitation, and palliative care				
38. Plans for the management of common cancer-related episodic, acute and chronic problems				
39. Plans for the management of cancer and cancer treatment-related symptoms (e.g., pain, nausea/vomiting, neuropathies, infection)				
40. Plans therapeutic interventions to restore or maintain an optimal level of functioning				
41. Establishes a comprehensive plan of care as patients transition from active treatment to cancer survivorship to end-of-life care				
42. Plans for long-term evaluation and management of late effects of treatment				
43. Coordinates care with attention to resource availability, accessibility, quality, and cost-effectiveness				
44. Coordinates care within a context of functional status, cultural considerations, spiritual needs, family or caregiver needs, and ethical principles				
45. Demonstrates awareness of appropriate clinical trials and research studies for which patients may be eligible and assists in recruiting patients as appropriate				

Back to Top

46. Documents the plan of care and intended outcomes to ensure that interventions will be implemented as planned				
47. Uses evidence-based strategies in the management of patients across the continuum of care (i.e., prevention, early detection, diagnosis, treatment, rehabilitation, survivorship, and end-of-life care)				
48. Monitors and manages the effects of cancer and cancer treatment				
49. Provides anticipatory guidance to assist patients and families in coping with the illness and its potential or expected outcomes				
50. Considers co-morbid conditions when implementing cancer treatment				
51. Treats episodic, acute, and chronic health problems				
52. Initiates appropriate treatments and referrals for patients experiencing an oncologic emergency (e.g., disseminated intravascular coagulation, superior vena cava syndrome, spinal cord compression)				
53. Implements interventions to support patients who have a rapidly deteriorating physiologic condition, including the application of basic life support				
54. Educates and supports patients in self-care strategies				
55. Refers patients to other healthcare providers for further evaluation as appropriate				
56. Refers patients and families to appropriate support services				
57. Facilitates transitions between healthcare settings to provide continuity of care				
58. Uses an ethical framework in all aspects of patient care to assist patients, families, and other caregivers on issues related to the care and management of symptoms, advance directives and palliative and end-of life care				
59. Coordinates palliative and end-of-life care in collaboration with patients, families, caregivers, and other members of the multidisciplinary healthcare team				
60. Determines the impact of cancer treatment and its side effects and long-term effects on patient outcomes				
61. Performs treatment planning and treatment summary visits, providing patient/family education, identifying potential needs for additional support and making appropriate referrals.				

Back to Top

62. Observes 5 bone marrow aspirations/biopsies and independently performs 10 bone marrow aspirations/biopsies with oversight from a physician or APP (competency referenced)				
II. APP-Patient Relationship	**Date Presented**	**Date Observed/ Reviewed**	**Initials**	**Comments**
1. Establishes caring relationship with patients, families, and other caregivers to facilitate coping with sensitive issues				
2. Facilitates patient and family decision making regarding complex treatment, symptom management, and end-of-life care				
3. Assists patients with cancer and their families in preparing for and coping with grief and bereavement				
III. Teaching-Coaching Function	**Date Presented**	**Date Observed/ Reviewed**	**Initials**	**Comments**
1. Develops interventions with patients and families that are consistent with patients' physiologic and psychological needs and values				
2. Educates patients, families, caregivers, and the community about cancer risk, screening, and early detection				
3. Uses evidence-based information to help patients with cancer and their families to make informed decisions				
4. Provides information to patients and families to facilitate adherence to cancer treatment, supportive care, and follow-up				
5. Educates patients and families about expected and potential adverse effects of prescribed pharmacologic and nonpharmacologic treatments and interventions				
6. Educates cancer survivors regarding their risk for long-term effects of cancer and its treatment (e.g., second malignant neoplasm, skin cancer, cardiopulmonary complications)				
7. Facilitates patient decision making by explaining treatment alternatives and potential outcomes, including the option of discontinuing active cancer treatment while optimizing supportive care				
IV. Professional Role	**Date Presented**	**Date Observed/ Reviewed**	**Initials**	**Comments**
1. Builds collaborative, interdisciplinary relationships to provide optimal care to patients with cancer				
2. Promotes life-long learning and evidence-based practice while continually acquiring knowledge and skills needed to improve patient care				

Back to Top

3. Recognizes the importance of participation in community and professional organizations that influence cancer care and support the role of the APP				
4. Maintains professional competence and credentials appropriate to the role and specialty				
5. Disseminates knowledge required to care for patients with cancer to other healthcare workers and caregivers through peer education, staff development, mentoring, and preceptor experiences				
6. Translates research findings and other evidence for other healthcare professionals to improve the care of patients with cancer				
7. Promotes the role of the APP and its significance in improving patient outcomes to the healthcare team, third-party payers, regulators, legislators and the public				
8. Advocates within the healthcare system and policy arenas for the health needs of patients with cancer				
V. Negotiating Healthcare Delivery Systems	**Date Presented**	**Date Observed**	**Initials**	**Comments**
1. Creates and enhances positive, health-promoting environments that maintain a climate of dignity and privacy for patients with cancer				
2. Documents clinical services provided in accordance with reimbursement regulations and guidelines				
3. Adheres to institutional, state, and federal lawsand regulations related to the care of patients withcancer				
4. Refers patients to appropriate local, state, and national patient-support resources				
VII. Monitoring and Ensuring the Quality of Healthcare Practice	**Date Presented**	**Date Observed/ Reviewed**	**Initials**	**Comments**
1. Applies evidence-based practice using quality improvement strategies in providing care to patients with cancer				
2. Promotes an environment for ethical decision making and patient advocacy for patients with cancer				
3. Advocates for patient/family rights to make decisions regarding durable power of attorney, advance directives, and related issues				
VII. Caring for Diverse Populations	**Date Presented**	**Date Observed/ Reviewed**	**Initials**	**Comments**
1. Recognizes the diversity among patients, families, caregivers, and the community that influences patient decisions and outcomes of care (e.g., rural patient				
2. Recognizes the impact of provider and institutional cultural biases on cancer care				

Back to Top

3. Recognizes the potential limitations of assessment methods and tools in a diverse population				
4. Incorporates resources that meet the diverse needs of patients into the planning and delivery of care				
5. Educates professional and lay caregivers to provide care with attention to individual diversity for patients with cancer				
VIII. Oncology Disease Specific Knowledge	**Date Presented**	**Date Observed/ Reviewed**	**Initials**	**Comments**
1. Breast				
2. Gastrointestinal				
3. Genitourinary				
4. Gynecologic				
6. Head and Neck				
7. Leukemia				
8. Lymphoma				
9. Melanoma				
10. Neuro-oncology				
11. Sarcoma				
12. Stem Cell Transplant				
13. Thoracic				
14. Benign hematology				
IX. Resources	**Date Presented**	**Date Observed/ Reviewed**	**Initials**	**Comments**
1. Association of Physician Assistants in Oncology (https://www.apao.cc/)				
2. ASCO membership for APPs (https://www.asco.org/membership/member-benefits/advanced-practice-provider)				
3. ASCOs AP Certificate (https://university.asco.org/)				
4. ASCO Cancer.net – patient resource that can be used for oncology staff members (https://www.cancer.net/)				
5. Understanding the Role of Advanced Practice Providers in Oncology in the US – September 2018 ASCO publication (https://advancedpractitioner.com/media/235725/jadpro_585.pdf)				
6. JADPRO – Journal of the Advanced Practitioner in Oncology (https://advancedpractitioner.com/)				
7. Advanced Practitioner Society for Hematology and Oncology (https://www.apsho.org/)				
8. Oncology Nursing Society (https://www.ons.org/ (Oncology Nursing Society) - resource for all APPs				
9. National Cancer Institute (https://www.cancer.gov/)				
10. National Comprehensive Cancer Network (https://www.nccn.org/)				

Back to Top

I have been oriented to my position's responsibilities and all areas as indicated on this checklist.

After Orientation, I feel trained and qualified to perform the tasks required of me.

Employee signature_____ Date _____

The employee has been trained and is capable of performing the appropriate duties outlined in the job description.

Mentor signature Date _____

Reference:
https://www.ons.org/sites/default/files/npcompentencies.pdf

Back to Top

ASCO®
AMERICAN SOCIETY OF CLINICAL ONCOLOGY

POSITION DESCRIPTION EXAMPLE

Back to Top

Title	Physician Assistant
Position Number	00000000
Department	GI Medical Oncology
Division	Cancer Medicine Division
Reports To	[Reports To]

MISSION STATEMENT
XXX

SUMMARY
The primary purpose of the Physician Assistant (PA) is to provide direct diagnostic and therapeutic patient care. The PA impacts quality of patient care and patient outcomes throughout the care continuum.

CORE VALUES
Caring Behaviors

- Courtesy: Is respectful and courteous to each other at all times.
- Friendliness/Teamwork: Promotes and rewards teamwork and inclusiveness; is sensitive to the concerns of our patients and our co-workers.

Integrity Behaviors

- Reliability: Communicates frequently, honestly and openly.
- Accountability: Holds self and others accountable for practicing our values.
- Safety: Models safe behavior (wears badge and personal protective equipment, washes hands, and keeps work area clean and orderly); Notices a safety concern or emergency, understands role and uses proper procedures to report it; Mitigates risk to the institution through sound business practices; Demonstrates ethical and personal responsibility in work and behavior

Discovery Behaviors

- Responsiveness: By his/her actions, creates an environment of trust; Encourages learning, creativity and new ideas.
- Personal Leadership/Self-Initiative: Helps others to identify and solve problems; Seeks personal growth and enables others to do so

Back to Top

JOB SPECIFIC COMPETENCIES

Medical/Clinical Knowledge Advanced Practice Providers demonstrate knowledge that includes an understanding of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion, and disease prevention.

Advanced Practice Providers demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care in their area.
Advanced Practice Providers demonstrate an investigatory and analytic thinking approach to clinical situations. this includes management of general medical and surgical conditions to include understanding, indication, contraindication, side effects, interactions and adverse reactions of pharmacologic agents and other relevant treatment modalities.

Patient Care Advanced Practice Providers provide patient care appropriate to the population(s) served.
Advanced Practice Providers demonstrate care that is effective, patient-centered, timely, efficient, and equitable for the treatment of health problems and the promotion of wellness.
Advanced Practice Providers counsel and educate patients and their families about disease and illness in addition to providing health care services and education aimed at preventing health problems or maintaining health.

Practice-Based Learning and Improvement Advanced Practice Providers engage in critical analysis of their own practice, experience, medical literature, and other information resources for the purpose of self-improvement.

Advanced Practice Providers participate in processes to assess, evaluate, maintain and improve their patient care practices.
Advanced Practice Providers demonstrate knowledge of scientific studies related to their patient's health problems.

Professionalism Advanced Practice Providers are committed to collaborative professional relationships with physicians and all members of the health care team.
Advanced Practice Providers function within their professional and personal limitations. Advanced Practice Providers demonstrate a high level of responsibility, ethical practice, sensitivity to a diverse patient population and adherence to legal and regulatory requirements.
Advanced Practice Providers demonstrate a commitment to excellence and on-going professional development.

Back to Top

Systems-Based Practice Advanced Practice Providers demonstrate an awareness of and responsiveness to the larger system of health care to provide patient care that is cost-effective and demonstrates resources allocation that does not compromise quality of care.

Advanced Practice Providers advocate for quality patient care and assist patients in dealing with system complexities.
Advanced Practice Providers accept responsibility for promoting a safe environment for patient care and recognize and participate in the correction of system-based factors that negatively impact patient care.

[Job Specific 6 Title] [Job Specific 6 Description]

[Job Specific 7 Title] [Job Specific 7 Description]

[Job Specific 8 Title] [Job Specific 8 Description]

[Job Specific 9 Title] [Job Specific 9 Description]

[Job Specific 10 Title] [Job Specific 10 Description]

Other duties as assigned

COMPETENCIES

Medical Knowledge - Employee demonstrates medical knowledge as defined by position description.

Patient Care - Employee demonstrates population-based competencies (age-specific, diversity) that cross the continuum of care; Employee functions within their professional scope.

Practice-Based Learning and Improvement - Employee participates in on-going learning and demonstrates application of it in his/her role.

Professionalism - Employee demonstrates commitment to collaborative professional relationships with physicians and all members of the heath care team.

Systems-Based Practice - Employee demonstrates his/her impact on the system of care.

Service Orientation

Provide service to our stakeholders, including patients, caregivers, colleagues and each other, in a safe, courteous, accountable, efficient and innovative manner to include:

- Promoting inclusiveness and collegiality that demonstrates respect and professionalism to our stakeholders at all times

Back to Top

- Modeling safe, ethical behavior that mitigates risk to the institution through sound business practices, and adherence to MD Anderson's Standards of Conduct, institutional policies and procedures
- Responding to requests in a timely manner while proactively communicating expectations for procedures, service arrival, or project deliverables to stakeholders
- Using the steps to HEAL (Hear, Empathize, Address and Learn) the relationship when service recovery is needed

Customer Focus

Builds and maintains customer satisfaction with the products and services offered by the organization through skills demonstrated in communication, personalization of interaction, regulation of emotions, and proactive problem solving.

Performance Statement Examples

- Presents a cheerful, positive manner with customers either on the phone or in person. Shows interest in, actively listens to and responds in a clear and timely manner to customer's expressed needs.
- Focuses on the customer's results, rather than own. Goes beyond basic service expectations to help customers implement complete solutions through personalized service that anticipates the customer's unspoken needs.
- Delivers services when and where the customer needs them. Explores options when unable to deliver a requested product or service, and pursues solutions until the customer is satisfied by addressing the root cause of the issue. Problem solves with patient, family member, care giver or clinical team to aid in proactively resolving issues and concerns.
- Provides to customers status reports and progress updates. Seeks customer feedback and ensures needs have been fully met.
- Talks to customers (internal and external) with a pleasant tone to find out what they need and how satisfied they are with the service. Remains in control of own reactions and responds in a manner that demonstrates appropriate nonverbal cues and complements the customer's emotions in the situation. Recognizes when its is necessary to escalate situations to leadership to ensure customer satisfaction.

Back to Top

REQUIREMENTS

Education: Graduate of a Physician Assistant training program approved by the Council of Medical Education of the American Medical Association.

Preferred Education: None

Certification: All of the following:
PA certification by the National Commission of Certification of Physician Assistants.
Licensed by the Texas State Board of Physician Assistant Examiners.
MAY BE REQUIRED: Eligible to be granted limited prescriptive authority by the State of Texas.
Must meet the American Heart Association Basic Life Support (BLS) , ACLS (Advanced Cardiac Life Support) or PALS (Pediatric Advanced Life Support) certification requirements.

Preferred Certification: None

Experience: None.

Preferred Experience: Preferred: Some experience in the clinical setting.

Onsite Presence: Is Required

WORKING CONDITIONS

	Frequency
Deadlines	--
Exposure to blood, bodily fluids, and/or tissue	Constant 67-100%
Exposure to Radiation	Occasionally 11-33%
Hazardous Chemicals and Materials	Occasionally 11-33%
Patient Contact	Constant 67-100%
Physical Proximity	Constant 67-100%
Wearing Protective Equipment	Frequent 34-66%

PHYSICAL DEMANDS

	Frequency	Weight
Arm/Hand Steadiness	Frequent 34-66%	--
Balancing	Frequent 34-66%	--
Bending/Stooping	Frequent 34-66%	--
Carrying	Frequent 34-66%	5-10 lbs
Depth Perception	Frequent 34-66%	--
Dynamic Flexibility	Frequent 34-66%	--

Back to Top

Eye/Hand Coordination	Constant 67-100%	--
Fine finger movement	Constant 67-100%	--
Handling	Frequent 34-66%	--
Hearing Sensitivity	Frequent 34-66%	--
Keyboarding	Constant 67-100%	--
Lifting	Frequent 34-66%	5-10 lbs
Neck Movements	Frequent 34-66%	--
Olfactory Perception	Occasionally 11-33%	--
Pushing/Pulling	Constant 67-100%	5-10 lbs
Reaching	Constant 67-100%	--
Sitting	Frequent 34-66%	--
Standing	Frequent 34-66%	--
Tactile Perception	Frequent 34-66%	--
Twisting	Frequent 34-66%	--
Visual Acuity	Constant 67-100%	--
Visual Color Discrimination	Occasionally 11-33%	--
Wrist Motion	Constant 67-100%	--
Walking	Frequent 34-66%	--
Lifting	Occasionally 11-33%	20-50 lbs
Pushing/Pulling	Frequent 34-66%	20-50 lbs
Pushing/Pulling	Frequent 34-66%	50+ lbs
Carrying	Occasionally 11-33%	20-50 lbs

COGNITIVE DEMANDS

Analytical Ability
Appropriate Behavior
Attention to detail
Comprehending
Creativity
Critical Thinking
Following Instructions
Giving and Receiving Constructive Feedback
Interpersonal Skills
Mathematical Skills/Reasoning
Memorizing/Remembering
Multitasking
Oral Communication
Organizing
Performing in a Leadership Role
Problem Solving
Reading Skills/Comprehension
Responding in emergency situations
Selective Attention
Working Alone
Written Communication

Back to Top

ACKNOWLEDGEMENTS

Manager	
not acknowledged	**not acknowledged**
Employee	
not acknowledged	**not acknowledged**

APPENDIX

Glossary of Terms –Cognitive/Social Demands

Analytical Ability - Ability to visualize, articulate, and solve both complex and uncomplicated problems and concepts and make decisions that are sensical based on available information.	**Multitasking** - The ability to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).
Appropriate Behavior - The ability to maintain a work environment that is respectful, professional and free from inappropriate and abusive workplace behavior.	**Oral Communication** - The ability to communicate information and ideas in speaking so others will understand.
Attention to Detail - Ability to achieve thoroughness and accuracy when accomplishing a task through concern for all the areas involved.	**Organizing** - The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules.
Comprehending - Ability to take in the meaning, nature, or importance of; grasp.	**Performing in a Leadership Role** - The ability to motivate, develop and direct people as they work, identifying the best people for the job.
Creativity - The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.	**Problem Solving** - Identifying problems and reviewing related information to develop and evaluate options and implement solutions.
Critical Thinking - Ability to use skillful and responsible thinking to solve or study a problem from all angles, and then exercise your best judgment to draw conclusions.	**Reading Skills/Comprehension** - The ability to recognize or identify as well as understand written sentences and paragraphs in work-related documents.
Following Instructions - Ability to complete one, or a series of, verbal or written directions.	**Responding in Emergency Situations** - Ability to react to a situation that poses an immediate risk to health, life, property or environment.
Giving and Receiving Constructive Feedback - The ability to give and receive constructive and positive feedback in a way that maintains relationships and increases performance.	**Selective Attention** - The ability to concentrate on a task over a period of time without being distracted.
Interpersonal Skills - The ability to interact positively and work effectively with others.	**Working Alone** - The ability to work alone in circumstances where assistance may not be readily available when needed.
Mathematical Skills/Reasoning - The ability to choose the right mathematical methods or formulas to solve a problem.	**Written Communication** - The ability to communicate information and ideas in writing so others will understand.
Memorizing/Remembering - The ability to remember information such as words, numbers, pictures, and procedures.	

Back to Top

Glossary of Terms – Physical Demands

Arm/Hand Steadiness - The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.	**Kneeling** - Bending legs at one or both knees to come to a rest on knee or knees.
Balancing - To be able, without assistance, to maintain body equilibrium to prevent falling when walking, standing or crouching.	**Lifting** - Raising an object from one level to another including upward pulling (this includes holding an object in a static position)
Bending/Stooping - Bending body downward and forward by bending the spine at the waist, requiring full use of the lower extremities and back muscles.	**Neck Movements** - To look, turn or flex the neck up, down or sideways.
Carrying - Transporting an object, usually holding it in the hands or arms, or on the shoulder	**Night Vision** - The ability to see under low light conditions.
Climbing - Ascending or descending ladders, stairs, scaffolding.	**Olfactory Perception** - The ability to detect and identify odors.
Crawling - Moving on hands and knees or hands and feet.	**Pushing/Pulling** - Exerting a force upon an object so that the object moves toward or away from the force (includes exerting force to hold an object in a static position and jerking an object)
Depth Perception - The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.	**Reaching** - Extending hand(s) and arm(s) in any direction to lift, grab, pull or push an item.
Driving - To operate a motorized vehicle, such as; forklift, backhoe, patient shuttle, cart or other piece of equipment	**Sitting** - To remain in a seated position.
Dynamic Flexibility - The ability to quickly and repeatedly bend, stretch, twist, or reach out with your body, arms, and/or legs.	**Squatting** - The movement to sit in a low or crouching position with the legs drawn up closely beneath or in front of the body or sit on one's haunches or heels.
Eye/Hand Coordination - The ability of the vision system to coordinate the information received through the eyes to control, guide, and direct the hands in the accomplishment of a given task.	**Standing** - To remain on one's feet in an upright position without moving greater than 2 steps.
Fine finger movement - The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.	**Tactile Perception** - Perceiving attributes of objects such as; size, shape, temperature, or texture by touching with skin, particularly that of fingertips.
Foot Action - To use one or both feet to activate a foot pedal, or some other foot action/movement required.	**Twisting** - Twisting the upper body (trunk) or bending the upper body to the side (lateral bending).
Glare Sensitivity - The ability to see objects in the presence of glare or bright lighting.	**Visual Acuity** - The ability to discern letters or numbers at a given distance according to a fixed standard.
Handling - Seizing, holding, grasping, turning or otherwise working with hand(s).	**Visual Color Discrimination** - The ability to match or detect differences between colors, including shades of color and brightness.
Hearing Sensitivity - The ability to detect or tell the differences between sounds that vary in pitch and loudness.	**Walking** - Moving about by foot.
Keyboarding - The ability to enter data by the means of a keyboard.	**Wrist Motion** - To bend or straighten the hand moving with the wrist joint; to twist/turn the wrist and arm as if to open a door handle.

Back to Top

Glossary of Terms – Working Conditions

Deadlines - Work environment is deadline focused on the time or date in which a particular task must be finished or a particular assignment, task or function must be done.	**Operating Equipment** - Worker will be required to work and/or operate equipment, machinery and/or sharp tools.
Electrical - Worker will be exposed to any combination of magnetic fields, electric fields, or nuisance shocks.	**Outside Work** - Work is outside and exposed to the natural elements/worker is subject to outside environmental conditions.
Exposure to animals - Worker will be exposed to animals.	**Patient Contact**
Exposure to blood, bodily fluids, and/or tissue - Worker will be exposed to blood and other potentially infectious bodily fluid and/or tissue.	**Physical Proximity** - Worker will be required to perform job tasks in close physical proximity to other people.
Exposure to Radiation - Worker will be exposed to radiation.	**Sedentary Environment** - Worker will spend majority of time seated at workstation.
Extreme Hot/Cold - Worker will be exposed to temperatures typically below 32° for periods of more than one hour or temperatures above 100° for periods of more than one hour.	**Shift Work** - Employee is required to work outside of standard day shift, i.e.; evening shift, night shift, holiday shift, weekend shift, rotating shift or split shift.
Hazardous Chemicals and Materials - Worker will be exposed to potentially hazardous chemicals/materials.	**Traveling** - Worker will be required to travel to other designated work locations either on TMC campus or outside of TMC campus.
Humid/Dry - Worker will be exposed to an environment marked by a relatively high level of water vapor in the atmosphere or relatively low level of water vapor.	**Working on uneven/slippery surface** - Worker will be exposed to working and/or walking surface conditions that are uneven and could be slippery, for example; floors, stairs, etc.
Lighting - Working in extreme bright or inadequate lighting conditions.	**Wearing protective equipment** - Worker will be required to wear devices to protect against hazards in the work environment, such as; safety glasses, face shields, respirators, and gloves.
Noise - Worker is exposed to sounds and noise levels that may be distracting or uncomfortable.	**Wet Conditions** - Worker will be required to work in wet or humid conditions that are non-weather related.
On Call - Employee is required to be available to return to duty outside their regularly scheduled work hours due to sudden demands on staffing or unexpected increases in activity.	**Working At Heights** - Worker will be required to work in high or precarious places.

Back to Top

ASCO®
AMERICAN SOCIETY OF CLINICAL ONCOLOGY

TIMELINE SCHEDULE EXAMPLES

Back to Top

APP Orientation Structure and Timeline (draft)

(note: patient care initiation is based on APP licensure and privileging effective date)

1. Week 1: Practice/health system orientation including EMR. Develop APP work group to guide role development and optimization of APP (e.g., physician, administrator, APP, other stakeholders). Plan to meet weekly for ongoing evaluation of team-based care/collaborative practice development of MD and APP.
2. Week 2: Begin ASCO University Advance Practitioner Certificate Programs. Allocate time each week for learning modules with timeframe for completion. Allocate time to spend with teams within the practice e.g., front desk, financial navigator, clinical check-in, clinic nurse/nurse navigator, triage, infusion suite.
    - AP Certificate programs are 3 courses with modules within each course: Basics 101 (10 modules), Basic 102 (10 modules), and Advanced 201 (10 modules). See AP Certificate Programs information within this information.
3. Weeks 3-4: Observe/shadow physician, observation in Infusion Suite and Pharmacy. Shadowing includes outpatient and inpatient.
4. Weeks 5-8: Working collaboratively with physician with attention to assessment, case presentation, decision making, collaboration, clinic workflow, and EMR documentation standards. Learning includes outpatient, inpatient, and procedures. APP work group development of APP scheduling guidelines and visit types identified in preparation for independent scheduling.
5. Weeks 9-12: APP begins to do individual assessments with shared patient visits, discussion of cases with physician, APP orientation with close physician supervision and direction (**note:** patient care initiation is based on state licensure effective date).
6. Weeks 13-17: Introduction to APP independent scheduling. APP begins to work more autonomously, able to utilize EMR systems independently, critical decision-making skills observed by physician, able to see some patients independently.
7. Weeks 17-21: APP may begin team-based, collaborative care with independent patient visit schedule. Weekly APP work group meeting continue with dialogue on APP development, opportunities for professional development, and optimization of the role. Schedule recommendations:
    a. Initial 1-3 patients/day max. (30-minute appointments)
    Re-evaluate for progress-if able increase patients/day or week
    b. Progress to 4-6 patients/day max. (30-minute appointments)
    Re-evaluate for progress-if able increase patients/day or week
    c. Progress to 7-10: 10 patients/day max (30-minute appointments)
    Re-evaluate for progress-if able increase patients/day or week
    d. Progress to 11-14 patients/day max. (30-minute appointments)
    Ongoing re-evaluation of capability and capacity with dialogue between physician, APP and within the APP work group.

Back to Top

ASCO®
AMERICAN SOCIETY OF CLINICAL ONCOLOGY

EXAMPLES OF PATIENT CARE PROTOCOLS

Back to Top

Standardized Protocol

Lumbar Puncture and/or Intrathecal Chemotherapy Administration

Advanced Practice Registered Nurses (APRNs)
and Physician Assistants (PAs)

Back to Top

Background

The lumbar puncture (LP) is an invasive technique that accesses the restricted compartment of the subarachnoid space in order to:

- Sample the cerebral spinal fluid (CSF) to assist in the diagnosis of central nervous system (CNS) infections, malignancies, subarachnoid hemorrhages and other inflammatory CNS disorders
- Deliver therapeutic/diagnostic agents (chemotherapy, antibiotics, contrast media for myelography/cisternography) to the intrathecal space
- Remove CSF to decrease intracranial pressure.

Indications for the Procedure

- Suspicion of meningitis
- Suspicion of subarachnoid hemorrhage
- Suspicion of CNS disease (meningeal carcinomatosis, Guillan Barre, demyelinating diseases such as multiple sclerosis)
- Administration of intrathecal therapeutic/diagnostic agents (chemotherapy, antibiotics, contrast media)
- Therapeutic relief of pseudotumor cerebri (idiopathic intracranial hypertension)

Contraindications for the Procedure

Contraindications for performing a LP or the intrathecal administration of drugs are:

- Increased intracranial pressure (except pseudomotor cerebri)
- Supratentorial mass or large posterior fossa lesions
- Midline shift
- Abnormal coagulation parameters. Evidence regarding the safety of performing lumbar puncture with thrombocytopenia or abnormal coagulation parameters is limited. A review of the literature suggests that lumbar puncture should be avoided when the platelet count is less than 40,000 or the INR is greater than 1.5 but clinical judgment based on individual assessments of risk and benefit is required.
- Anticoagulants (see “Patient Preparation”)
- Suspected spinal epidural abscess
- Skin infection at the lumbar puncture site
- Congenital abnormalities (tethered cord, myelomeningocele)

Back to Top

Materials

1. Sterile gloves (2 pairs)
2. Sterile lumbar puncture tray (includes sterile drapes, manometer, 3-way stopcock, 1% lidocaine, 3 cc syringe, 20 gauge needle, 25 gauge needle, four capped test tubes, 2x2 gauze, Band-Aid)
3. 22 gauge spinal needle
4. 10 cc syringe
5. 18 gauge needle
6. Betadine
7. 1% Lidocaine (extra)
8. PPE (Personal Protective Equipment)
9. Plastic specimen bags
10. Appropriate laboratory requisitions

Time-out Procedure

Upon arrival of patient to exam room a time out procedure is performed using patient name, medical record number and date of birth to ensure correct patient is undergoing the procedure.

This process will also include confirming with the patient the ordered procedure and identifying the correct site/side to be used. Time Out is performed in accordance with Joint Commission standard UP.01.03.01 (right of refusal) and NPSG.01.01.01 (use of at least two patient identifiers).

Adherence to Guidelines

- Universal Protocol (per Universal Protocol form).
- The site is marked prior to the procedure by a licensed, independent practitioner.
- The marked site should be sufficiently permanent to be visible after the skin is prepped and draped.

Back to Top

Preparation for Lumbar Puncture

1. Perform time-out per institutional guidelines.
2. Evaluate the medical history and assess available radiological images such as CXR or MRI of the spine to identify any of the following conditions:

    A. Curvature of the spine/scoliosis
    B. Disc herniation
    C. Previous kyphoplasty or vertebroplasty
    D. Spinal surgeries with placement of rods/screws

    *A history of spinal surgery or vertebroplasty/kyphoplasty may prompt diagnostic imaging if currently not available and may ultimately require the lumbar puncture to be done under fluoroscopy.

3. A CT of the head should be ordered prior to the first LP in patients with the following conditions (and prior to subsequent LPs for any interval neurological findings):

    A. CNS disease (mass lesion, stroke, focal infection)
    B. Patients over the age of 60
    C. New onset seizures
    D. Papilledema
    E. Altered mental status
    F. Focal neurological findings
    G. Immunocompromised patients

4. Assess PT/INR, PTT and platelet count within 24 hours (or per clinical judgment) prior to the procedure. If time permits, these lab values should be corrected with the administration of platelets, fresh frozen plasma or vitamin K as clinically deemed appropriate.

5. Discontinue anticoagulants according to recommended time intervals. (Refer to Table 1 on page 5). Table 1 includes current guidelines for stopping and starting anticoagulants before and after a neuraxial puncture.

Back to Top

TABLE 1:

Anticoagulant	Time before procedure	Time after puncture
Heparin	4-6 hours	1 hour
Low Molecular-weight Heparin (prophylactic dose)	12 hours	4 hours
Low molecular-weight Heparin (treatment dose)	24 hours	4 hours
Fondaparinux	36-42 hours	6-12 hours
Coumadin	INR < 1.4	Immediately after procedure
Aspirin/NSAIDS	None	None
Clopidogrel*	7 days	Immediately after procedure

*For patients with significant cardiac history (myocardial infarction, recent coronary stent placement), Cardiology should be consulted prior to stopping clopidogrel. If it is determined that clopidogrel should be continued, the lumbar puncture should be done under fluoroscopy to reduce the risk of epidural bleeding.

Anesthesia, Analgesia, or Sedation

- Anxiolytics such as benzodiazepines can be given if deemed necessary based on the clinician's discretion.
- Topical anesthesia (EMLA cream) can be used 60-90 minute to the procedure.
- Standard lumbar puncture kits may not supply enough local anesthetic for the procedure. Additional lidocaine may be ordered, if provider feels it is needed to maximize patient comfort.
- Buffered lidocaine may decrease the pain of local infiltration. Lidocaine can be buffered by adding 1 mL of 0.5% bicarbonate solution to 9 mL of lidocaine.

Back to Top

Procedure for Lumbar Puncture

1. Explain procedure to patient and obtain informed consent**.** Informed consent should be obtained prior to the procedure and should include the risks, benefits and possible complications of the procedure.

2. The current form is available in the Electronic Health Record. Consent may include both the Disclosure and Consent for Anesthesia and/or Perioperative/ Peri-procedure Pain Management (Analgesia) Consent.

3. Perform "time out" procedure; check chemo with the nurse if applicable; obtain equipment.

4. Don PPE

5. Wash hands

6. Position the patient
    A. Two positions to maximize interlaminar space opening:
        1. Seated, leaning forward over bedside table with knees flexed. Flex spine anteriorly. The seated position is preferred due to the increased the distance of the L2-L3, L3-L4, and L4-L5 spaces by 7%, 11%, and 21%, respectively, as compared to the lateral decubitus position with hips and knees flexed.
        2. Left recumbent/lateral on bed with knees, neck, hips flexed towards the chest similar to fetal position.
            a) Left recumbent/lateral must be used to check opening/closing pressures.

7. Identify L3 – L4 and L4 – L5 interspaces.
    A. The adult spinal cord ends at the level of L1. Utilizing the L3-L4, L4-L5, and L5-S1 interspaces allows access to the spinal fluid safely below the spinal cord. Use the highest points of the posterior iliac crests as a guide to the 4th lumbar vertebral body. The L4 and L5 interspaces can be identified with palpation, along with the interspaces of L3-L4, L5-S1.
    B. Mark the interspace with (sorry, this is ok) in the midline.

8. Equipment set up
    A. Open lumbar puncture kit in a sterile manner
    B. Put on sterile gloves
    C. Open and arrange each of the four numbered tubes
    D. Test the needle stylet
    E. Preassemble manometer, attach the 3-way stopcock and place on side of sterile tray.

9. Skin Prep

Back to Top

A. Prepare skin at the selected interspace, plus one level above and one below, with an antiseptic solution (i.e., providone iodine). Antiseptic solution can decrease skin bacteria colony counts to 0 to 2 colonies/in^2 in as little as 15 seconds
B. Cover the sterile area with sterile drape to expose only the area that has been prepped.
C. Draw 1% lidocaine into syringe
D. Administer local anesthetic to the superficial skin to the spinous process. Inject a small amount of lidocaine into the posterior spinous region and allow time for the local anesthetic to diffuse and attain maximal effect.

10. Procedure
    A. Maintain the posterior spinous processes and the umbilicus as landmarks
    B. Insert a 22-gauge spinal needle through the skin at a slightly cephaladad angle directing toward the umbilicus. For the Left recumbent/lateral position, the bevel of the needle should face the patient's flanks to allow the needle to spread rather than cut the dural sac since the fibers of the dural sac run parallel to the spinal axis. For the seated position, face the bevel either right or left.
    C. If the spinous processes are encountered, withdraw the needle slightly and change the angle, then re-advance.
    D. Usually there is a "pop" felt as the spinal needle penetrates the dura. Once that is noted, advance the needle slightly by no more than1-2 cm further.
    E. If no "pop" is felt, advance the needle a total of 3-4 cm and then begin removing the stylet intermittently to check for fluid return.
    F. Connect the manometer to the needle to measure opening pressure. If an opening pressure is not required, remove the stylet and collect CSF sample.

11. CSF Pressure Measurement
    A. Opening Pressure: Once fluid returns, attach the manometer through the end of the stopcock and note the height of the fluid column after it levels out. The patient's legs should be straightened out during the measurement of opening pressure or a falsely elevated pressure may be obtained.
    B. Note and record the: color, clarity and opening pressure

12. CSF Sample Collection
    A. Fill test tubes with CSF based on diagnostic testing needs; label each in the order it was collected

13. Measure closing pressure if required
    A. After the CSF has been collected and before the needle is withdrawn, a closing pressure can be obtained. Obtaining a closing pressure is indicated when it is important to know how much the CSF pressure has been lowered by removing CSF during the LP such as when treating pseudotumor cerebri. Turn the stopcock handle toward the operator and the CSF is then directed into the monometer. The closing pressure is noted when the CSF stops rising in the tube.
    B. Record the closing pressure

Back to Top

14. If applicable, slowly instill appropriate intrathecal chemotherapy

15. Upon completion of CSF and/or chemotherapy, replace the stylus prior to withdrawing the spinal needle.

16. Cover the puncture site with a sterile dressing

17. Dispose of bio-hazard material

18. Label and prepare the specimens for transport

19. Document the procedure with a detailed note in the medical record.

Specimen Collection/Handling/Transportation

1. Collection:
    A. CSF should be collected by gravity into sterile collection and should not be aspirated as slight negative pressure may increase the risk of bleeding or trapping of nerve root in the needle. The amount of CSF collected in each tube depends on the type of investigation. In general:
        1) Microbiology: 1-2 cc
        2) Cytology: minimum of 10-12 cc (placed on ice)
        3) Chemistry, cell count and differential: 2 cc
        4) Flow Cytometry: 5-10 cc
    B. If possible, collect up to 10-12cc of CSF for Cytology as more fluid will allow for a more accurate determination of malignant cells. At least 3 negative CSF samples are required to rule out leptomeningeal disease.
    C. The order of collection is based on the tests ordered. Cytology and Flow Cytometry should NOT be the first tube collected.
    D. The collection tubes should have a patient label on each tube that includes the patient name, medical record, birth date, type of specimen (CSF), date of collection and the initials of the person who performed the procedure.
    E. The specimens should be placed in plastic bags with the appropriate form completed for each test. CSF specimens for Cytology should be placed on ice and taken to Cytology as soon as possible for specimen preparation. The majority of other CSF specimens collected should be at room temperature unless otherwise specified.

2. Transportation:
    A. CSF for Cytology and Flow Cytometry should be transported to the specific department(s) as soon as possible to avoid cell degradation.

Back to Top

Complications, Prevention and Management

1. Post lumbar puncture headache (PLPHA)
    A. A PLPHA is the most common complications of the LP (10-30% of patients) and usually occurs within 12-48 hours after the procedure. It is usually self-limiting but may last for up to 2 weeks.
    B. The patient typically presents with a frontal or occipital headache which is exacerbated in the upright position and improved in the supine position and may be accompanied by nausea, vomiting, vertigo, diminished hearing, tinnitus and blurred vision.
    C. Female gender, history of headache prior to lumbar puncture and younger age (age 20-40) appear to be associated with higher incidence of PLPHA.
    D. Post LP headache is directly related to the size of the needle. A smaller needle produces a smaller tear in the dura, and thus there is less potential for CSF leakage.
    E. Leakage leads to low CSF pressure, due to the leakage rate exceeding the rate of CSF production. In adults, CSF fluid is produced at 20 to 25 mL/hour. Ten mL of CSF removed by LP in an adult is replaced in approximately 30 minutes.
    F. PLPHA can occur if the bevel is inserted perpendicular rather than parallel. The dural fibers run parallel to the axis of the spine. When the dura is punctured with the bevel perpendicular, more fibers are severed.
    G. Nerve root aspiration due to unstyletted removal of the spinal needle at the completion of the procedure can also cause PLPHA
    H. Prevention/Intervention
        1) Use a 22 gauge (or smaller) spinal needle. The use of atraumatic needles (rather than large bore cutting needles) also decreases the risk of post LP headache but may be more technically difficult to use.
        2) Insert bevel parallel to the axis of the spine rather than perpendicular (the beveled edge of the needle is facing the operator).
        3) Replace the stylet prior to removing the spinal needle
        4) Avoid post procedure nausea and vomiting by pre-medicating prior to procedure with anti-emetic.
        5) Recent, well-controlled studies do not support the common practice of immobilizing patients or pre-treating with IV fluids in order to prevent headache.
        6) Oral and IV caffeine benzoate can be used to treat refractory headaches.
        7) Epidural blood patch can be performed for those refractory to caffeine.

2. Infection:
    A. Meningitis is an uncommon complication of LP.
    B. Common causative organisms isolated are *streptococcus salivarus, streptococcus viridans, alpha-hemolytic strep, staphylococcus aureus,* and *pseudomonas aeruginosa*.
    C. Studies have suggested that post LP meningitis could arise from aerosolized oropharyngeal secretions from personnel present during the procedure.

Back to Top

D. Discitis and vertebral collapse is a rare but serious complication of LP. Discitis should be considered in patients with complaints of severe back pain, paraspinal muscle spasm, and inability to perform straight leg raises.
E. Prevention and Intervention:
    1) Maintain sterile technique during the procedure
    2) The CDC recommends using a face mask when injecting material in the spinal canal or if the person doing the procedures has an upper respiratory infection or if the procedure is expected to be prolonged.
    3) A lumbar puncture should not be performed in patients with suspected epidural abscess or skin infections in the lumbar region.
    4) Discitis/meningitis is treated with antimicrobials as appropriate

3. Bleeding/Spinal Hematoma
    A. Bleeding is most likely to occur in a patient with bleeding diathesis. (Thrombocytopenia, bleeding disorders, and coagulopathy).
    B. Anti-coagulation and LP are known to increase risk of developing spinal hematoma.
    C. A traumatic tap causes bloody CSF drainage, which usually occurs when the LP needle is placed too far laterally or advanced too far anteriorly.
    D. Spinal hematomas usually present within the first 6 hours after LP although 22% of cases will present 24 hours after the procedure.
    E. A spinal hematoma produces persistent back pain or neurological findings (e.g., weakness, radicular pain, decreased sensation to lower extremities or incontinence) after LP and requires urgent evaluation by Neurosurgery.
    F. Prevention and Intervention:
        1) Correct any acquired or inherent coagulopathies before performing lumbar puncture.
        2) Patients who cannot be taken off anticoagulation prior to the LP or who are at high risk for bleeding should be done under fluoroscopy.
        3) Monitor for symptoms of cauda equina syndrome.
        4) If epidural bleeding is suspected, an MRI should be done as soon as possible and prompt surgical intervention, usually laminectomy and evacuation of the blood is needed. Timely decompression of the hematoma is essential to avoid permanent loss of neurological function.

4. Subdural Hemtoma
    A. Removal of large volumes of CSF in the elderly my result in tearing or avulsion of a vein
    B. Prevention/Intervention:
        1) Avoid removing large amounts of CSF in the elderly.

5. Intraspinal Epidermoid Tumor/cyst
    A. Develops secondary to the LP performed without the stylet in place.
    B. It is caused by epidermoid tissue that is easily detached by a hollow needle and implanted into the spinal canal.
    C. Epidermoid cysts can have variable presentations depending on the degree and level of spinal involvement ranging from paraplegia to focal spinal cord deficits.

Back to Top

D. Prevention and Intervention:
    1) The lumbar puncture should be performed with a styletted needle and tightly fitted stylet.
    2) The treatment of an epidermoid cyst is surgical resection.

6. Cerebral Herniation:
    A. It is the most serious complication of LP and it is believed that withdrawal of fluid when initial intracranial pressures are abnormal could result in cord compression or cerebral herniation.
    B. Prevention and Intervention
        1) CT scan should be done prior to lumbar puncture for high risk patients (as previously mentioned)
        2) A careful neurological examination should always precede lumbar puncture.
        3) Monitor for signs of cerebral herniation after the procedure (persistent vomiting, rapid decline in mental status, severe respiratory depression)
        4) Treatment is emergency cranial decompression.

7. Abducens Palsy
    A. Sixth nerve palsy is a very rare complication caused by intracranial hypotension.
    B. Intracranial hypotension after spinal tap is due to prolonged spinal fluid leakage and delayed closure of the dural defect. Downward sagging of the brain and traction on cranial nerves may lead to abducens palsy.
    C. Prevention and Intervention
        1) Using smaller size needle will reduce the risk.
        2) Most patients recover completely within days to weeks.

8. Radicular Symptoms and Low Back Pain
    A. Local pain in the back after LP is common due to injury of the spinal ligament.
    B. Patients may experience transient electrical- type pain in one leg during the procedure due to nerve irritation.
    C. Prevention and Intervention
        1) If radicular symptoms occur during the procedure, the needle should be removed and redirected.
        2) Replace the stylet prior to removing spinal needle
        3) Back pain may persist for several days, but rarely beyond. Analgesics may be helpful.

Patient Monitoring Post-Procedure

1. After the lumbar puncture the patient should be monitored for signs/symptoms of:
    A. Epidural bleed*
        1) Leg weakness/sensory deficits

Back to Top

2) Urinary retention
3) Bowel incontinence
4) Saddle anesthesia
5) Persistent back pain

* If an epidural bleed is suspected, obtain an emergent consult from Neurosurgery for spinal decompression.

B. Cerebral herniation**
1) Persistent vomiting
2) Rapid decline in mental status
3) Severe respiratory depression

**If cerebral herniation is suspected, obtain an emergent consult from Neurosurgery for cranial decompression.

2. Post-Procedure Instructions
   A. Activity as tolerated. There is no evidence to support bed rest after lumbar puncture
   B. Keep Band-Aid dry for 24 hours
   C. Report symptoms of epidural bleed or cerebral herniation to the nurse
   D. Report headache or any other associated symptoms that can occur for up to one week after the procedure.

Interpretation of Results

1. Opening Pressure
   A. Accurate pressure recordings should be taken when the patient is breathing quietly in a calm state as Valsalva maneuvers from shouting, crying or coughing can cause a transient rise in cerebral venous pressure. The patient's legs should be straightened slightly at the hips to avoid compression of the intra-abdominal cavity.
   B. Normal opening pressure is between 10 and 20 cm in adults with levels above 25 cm regarded as pathological.

Back to Top

2. CSF Findings:

Test	**Leptomeningeal Disease**	**Bacterial Meningitis**	**Viral meningitis**	**Fungal Meningitis**	**TB Meningitis**
Opening Pressure	Normal to elevated	Elevated	Usually normal	Variable	Variable
WBC Count		>1000 per mm2	<100 per mm2	Variable	Variable
Cell Differential	Predominance of mononuclears	Predominance of polymorph-onuclearcytes	Predominance of lymphocytes	Predominance of lymphocytes	Predominance of lymphocytes
Protein	Increased	Mild to marked increase	Normal to increased	Increased	Increased
CSF-to-serum Glucose ratios	Normal to low	Normal to marked decrease	Usually normal	Low	Low

Back to Top

Appendix A: Standardized Competency Assessment

Name:_____Date: _____

Evaluator_____

Competency	Achieves	Does not Achieve
1. States indications/contraindications for the procedure(s)	☐	☐
2. States possible complications, preventative measures and course of action to take if complications occur.	☐	☐
3. Explains procedure to the patient	☐	☐
4. Obtains informed consent	☐	☐
5. Orders appropriate lab and equipment prior to the procedure	☐	☐
6. Checks chemo with the nurse	☐	☐
7. Performs "Time Out"	☐	☐
8. Demonstrates patient positioning	☐	☐
9. Identifies and marks appropriate interspaces	☐	☐
10. Dons PPE (Personal Protective Equipment) per MD Anderson Institutional policy.	☐	☐
11. Prepares equipment using sterile technique	☐	☐
12. Preps the skin	☐	☐
13. Administers local anesthetic	☐	☐
14. Inserts spinal needle correctly	☐	☐

Back to Top

15. Measures opening pressure correctly (if applicable)	☐	☐
16. Verbalizes understanding of the correct amount of CSF to obtain for specific tests and the correct order to obtain the fluid in each numbered vial	☐	☐
17. Obtains cerebral spinal fluid	☐	☐
18. Measures closing pressure (if applicable)	☐	☐
19. Administers intrathecal chemotherapy (if applicable)	☐	☐
20. Removes spinal needle with stylet in place	☐	☐
21. Applies Band-Aid to site	☐	☐
22. Labels collection vials correctly	☐	☐
23. Handles and transports specimens correctly	☐	☐
24. Disposes of bio-hazard materials properly	☐	☐
25. Verbalizes appropriate post-procedure patient monitoring	☐	☐
26. Educates patient regarding post-procedure instructions	☐	☐
27. Verbalizes when anticoagulants should be restarted	☐	☐
28. Evaluates diagnostic reports.	☐	☐
29. Dictates accurate report of the procedure	☐	☐
30. Enters appropriate charges	☐	☐

Evaluator's Signature_____ **Date**_____

Back to Top

References

1. American society of Anesthesiologists practice guidelines on prevention, diagnosis, and management of infectious complications associated with neuraxial techniques. Lumbar puncture. Updated 2010. DynaMed.

2. Boon, J.M., Abrahams, P.H., Meiring, J.H., Welch, T. Lumbar puncture: anatomical review of a clinical skill. *Clinical Anatomy*, 17: 544-553.

3. Evans, R.W., Armon, C., Frohman, E.M. et al. Assessment: Prevention of post lumbar puncture headaches. *Neurology* 2000, (55) : 909.

4. Gardner, D.J., O'Gorman, A.M., Blundell, J.E. . Intraspinal epidermoid tumor :Late complication of lumbar puncture. *CMAJ* (1989), 141 (8).

5. Gogarten W, Vandermeulen E, Van Aken H, Kozek S, Llau JV, Samama CM; (2010).Regional aneaesthesia and antithrombotic agents: Recommendations of the European Society of Anaesthesiology. European Soceity of Anaesthesiology. *Eur J Anaesthesiol. Dec;27(12):999-1015.*

6. Horlocker TT, Wedel DJ, Rowlingson JC, Enneking FK, Kopp SL, Benzon HT, Brown DL, Heit JA, Mulroy MF, Rosenquist RW, Tryba M, Yuan CS. (2010). Regional anesthesia in the patient receiving antithrombotic or thrombolytic therapy: American Society of Regional Anesthesia and Pain Medicine. Evidence-based Guidelines (Third edition*). Reg Anesth Pain Med. Jan-Feb; 35(1):64-101.*

7. Horlocker TT. Low molecular weight heparin and neuraxial anesthesia. *Thromb Res* (2001); 141: 101.

8. Johnson, K., Sexton, D. J. MD, Lumbar Puncture: Technique; indications; contraindications; and complications in adults. Up to date. http.uptodate.com/contents/lumbar-puncture-technique-indications-contraindications . Retrieved 3/20/2012

9. Layton KF, Kallmes DF, Horlocker TT. Recommendations for anticoagulated patient's image-guided spinal procedures. *AJNR AM J Neuroradiol* , (2006) 27: 468.

10. Pfenninger, John L. and Fowler,Grant C. Procedures for primary care second edition. Lumbar puncture, 1649-53

11. Ruff, R.L., Dougherty, J.H. Complications of lumbar puncture followed by anticoagulation. http://stroke.ahajournals.org/content/. *Stroke*, (1981), 12.

12. Seupaul, R.A. Lumbar puncture, ACP Pier Review 12/08/2011.

13. Chronic subdural hematoma complicating spinal anesthesia: A case report and review of literature. http://www.bioline.org.br/js.

Back to Top

14. Sternback G. Lumbar puncture. *J Emerg Med* (1985), 2:199.

15. Vallejo, M.C., Mandell, G.L., Sato, P.D., Ramanathan, S. Postdural puncture headache: A randomized comparison of spinal needles in obstetrics patients. *Anesthesia and analgesia* 2000; 91-916-20

16. Van Veen JJ, Nokes TJ, Makris M. The risk of spinal haematoma following neuraxial anesthesia or lumbar puncture in thrombocytopenic individuals. *BR J Haematol* 2010, 148:15.

17. Vermeulen, M. and Van Gijn, J. The diagnosis of subarachnoid hemorrhage. *J Neurol Neurosurg Psychiatry* 1990; 53:365.

18. Wright, BC, James TF, Lai, A., Sinclair, A.J. Cerebrospinal fluid and lumbar puncture: a practical review. *J. Neurol*. Published online Jan. 26, 2012.

19. The diagnostic spinal tap. Health and Public Policy Committee, American College of Physicians. *Ann Intern Med* 1986; 104:880.

Back to Top

ASCO®
AMERICAN SOCIETY OF CLINICAL ONCOLOGY

PROFESSIONAL EVALUATION EXAMPLE

Back to Top

APP Performance Evaluation Competency Scoring Guidelines

	1 Developing Performance	2 Successful Performance	3 Exceptional Performance
Medical Knowledge • Demonstrates knowledge of pathophysiology, patient presentation, differential diagnosis, management, surgical principals, health promotion and disease prevention • Demonstrates knowledge of established and evolving biomedical and clinical science • Demonstrates an investigatory and analytic thinking approach to clinical situations	Unsafe AND/OR Inaccurate in applying medical knowledge; requires constant or frequent prompting	Safe and accurate in applying medical knowledge safely and accurately with occasional or rare prompting	Safe and accurate in applying medical knowledge safely and accurately with no prompting
Patient Care • Provides care appropriate to the population(s) served • Demonstrates care that is effective, patient-centered, timely, efficient and equitable • Counsels and educates patients and their families about disease and illness	Provides patient care that is insufficient AND/OR inappropriate AND/OR does not adhere to standard of care	Provides effective patient care using appropriate skills and adheres to standard of care with occasional or rare prompting.	Provides effective patient care using appropriate skills and adheres to standard of care with no prompting.
Professionalism • Is committed to collaborative professional relationships • Functions within professional and personal limitations • Demonstrates a high level of responsibility, ethical practice, and adheres to legal and regulatory requirements • Demonstrates a commitment to ongoing professional development	Does not adhere to Ethical, legal AND/OR regulatory requirements	Adheres to ethical, legal and regulatory requirements and often provides guidance in these areas	Consistently provides leadership and expertise in ethical, legal and regulatory requirements
Practice-Based Learning and Improvement • Engages in critical analysis of own practice and engages actively in self-improvement of own clinical practice • Participates in quality improvement processes of own practice • Demonstrates knowledge of emerging scientific studies related to their practice for the purpose of improving their own practice	Does not understand AND/OR does not display a commitment to improvement in clinical practice. Refuses/resists participation in clinical practice improvement projects	Demonstrates understanding and commitment to improvement in clinical practice. Occasionally participates in clinical practice improvement projects.	Demonstrates expertise in the understanding and commitment to improvement of clinical practice. Consistently participates in clinical practice improvement projects
System-Based Practice • Demonstrates an awareness and responsiveness to the larger system of care to provide patient care that is cost-effective • Advocates for quality patient care and assists patients in dealing with system complexities • Accepts responsibility for promoting a safe environment and participate in correction of system-based factors that negatively impact patient care	Does not demonstrate attention to cost-effective care, advocacy for quality patient care, AND/OR assisting patients in navigating the complexity of the health care system. Does not promote safe patient care environment OR requires regular prompting to do so	Demonstrates attention to cost-effective care, advocacy for quality patient care, and regularly assists patients in navigating the complexity of the health care system while promoting patient safety	Demonstrates expertise in cost-effective care, advocacy for quality patient care, and consistently assists patients in navigating the complexity of the health care system. Demonstrates leadership in patient safety.

Rev 4/2016

Back to Top