종양 전문간호사
ONCOLOGY CLINICAL NURSE SPECIALIST

국립암센터.유방암센터
노정실

Definition
The Results Are In: A Decade of Growth
We are proud to present the results of the 2007 National Salary and Workplace Survey of Nurse Practitioners. Our exclusive data from 6,162 respondents will provide the facts you need to negotiate the best possible salary and benefits package. (cover image by Val Costanzo)

By Jill Rollet and Sarah Lebo

CE Offering/Neurology
The Uninvited Guest: Multiple Sclerosis
Learn about the causes, presentation, diagnosis and treatment of multiple sclerosis. MS is a chronic neuroimmunologic disease of the central nervous system that affects the brain, spinal cord and optic nerves.

By Rebecca J. Andes, NP

Pediatrics
Gastroesophageal Reflux: Common, Yet Complex
Gastroesophageal reflux is a common gastrointestinal complaint during infancy. Learn about proven and practical strategies to share with worried parents.

By Victoria Weill, NP

Geriatrics
Reflections: Two Weddings and a Funeral
These professional and personal reflections about older adult patients show that the joys of life— and love— don’t stop after age 70 or 80 or 90.

By MJ Henderson, NP

Women’s Health
NPs as Breast Cancer Navigators
This article explores the role of a patient navigator focused on breast cancer. Congress recently allocated funds for pilot programs to further develop this role, and nurse practitioners are well qualified to lead the way.

By Ginny Crockett-Maillet, NP

Diabetes/Men’s Health
ED: A Predictor of Metabolic Syndrome?
Evidence suggests that erectile dysfunction is a risk factor that can signal the need for intervention to prevent diabetes.

By Brandon J. Craft, NP

Pharmacology/Rheumatology
Rituximab for Rheumatoid Arthritis: Practical Guidance for Administration
This article explains how to achieve optimal patient outcomes with rituximab, a medication indicated for the treatment of rheumatoid arthritis.

By Nicole Furfaro, NP

Cardiology
Prehypertension: Why Should We Worry?
Prehypertension, an important marker of cardiac risk, requires more aggressive action in all clinical settings. Learn about lifestyle interventions and pharmacologic approaches that work.

By Johnanna Hernandez, NP

Columns and Departments
Editorial
The Front Page: News and Profiles. By Sarah Lebo

Smart Practice: Meeting Practice Requirements. By Melinda Miller, NP

Women’s Health Research: Obesity. By Amanda C. Krbec, NP

Technology: Web Site for Your Practice. By Andrew Craig, NP

Case Studies: Pain and Microcytic Anemia. By Marlene E. McHugh, NP

Office Procedures: Genital Warts. By Molly Stark, NP, and Alisa Hilinski, NP

Patient Information: Pumping Breast Milk.

Product Report: Tools and Medications

Calendar: CE, Certifications and More

Marketplace
Ad Index

Gear, Gadgets and Gifts: ADVANCE Healthcare Shop

Career Center: Toot Your Own Horn. By Laurel Halloran, NP

The Back Page: Never Forget Your Roots. By Laura Thiem, NP Coming Next Month

Nurse Clinician

DUTIES: A Nurse Clinician performs clinical, administrative and research work in the specialty area assigned:

- acts as a resource person for the specialty
- participates in the assessment of patients:
- assists in the formulation of standards for nursing practices and procedures:
- consults with nursing staff and other departments:
- establishes rapport with patient, patient’s families and medical staff:
- participates in providing inservice training to nursing staff:
- develops, implements, coordinates and evaluates nursing regimens for assigned patients:
- provides patient and family education utilizing individual and group instruction.
Oncology Nurse Specialist

Clinical Nurse Specialists trained to specialize in the care and general supervision of cancer patients, primarily in hospitals.

Most Oncology Nurse Specialists treat either chronic or critical cancer patients.

Role: typically to provide primary care, monitoring the physical condition of their patients, prescribing medications, and developing symptom management strategies to improve QOL.

To facilitate patient comfort, Oncology Nurse Specialists may also work as educators, researchers, policy-makers, and administrators within hospital departments to facilitate the improvement of patient care and the education of family members, caregivers, and other hospital staff in the care of cancer patients.

Requirement for ONS

- Oncology Nurse Specialists are required to train as Clinical Nursing Specialists prior to completing any advanced training in the field.
- They are required to have some advanced training in the nursing field.
- Most Clinical Nursing Specialists have advanced degrees. Approximately 93% of all CNSs have a Master’s Degree or equivalent graduate certificate to complement their training as an RN.
- Oncology Nurse Specialists are required to have an active RN license and typically have a Bachelor of Science Degree in Nursing to have obtained this qualification.
- Specialist training in oncology is a requirement for this profession, typically met by the practical experience of each candidate. Experience is focused on the general care of cancer patients in both in- and outpatient settings, as well as the education of patients, of families, and of other medical personnel in the care of cancer patients.
Treatment

- Responsible for helping to treat patients who are terminally ill. For example, patients who have severe forms of cancer are often looked after by an oncology nursing specialist.

- Working along side with an oncologist, ONS are responsible for checking in on the patient's status daily, prescribing certain medications to make them more comfortable, as well as helping put together a treatment plan.

Research

- There have been many different types of research for cancer treatment and care. By having nurses have a concentration in oncology, more patients are able to receive the specific care they need by a highly trained professional for their specific disease.
Hospice

- One of the areas where oncology nursing specialists are becoming more apparent is outside of the hospital working for programs such as Hospice.
- Home health care is becoming increasingly popular for individuals with terminal illnesses who wish to live out their dying days with their family in the comfort of their own home. Oncology nursing specialists are able to come to the person’s home and assist them with treatment, medication and keeping them comfortable.
- The increasing amount of trained nurses for cancer patients is steadily increasing today.

More About Hospice

Hospice is primarily a concept of care, not a specific place of care.

Hospice care is provided through an interdisciplinary, medically directed team: a physician, a nurse, a home health aide, a social worker, a chaplain and a volunteer.

The hospice nurse makes regularly scheduled visits to the patient, providing expert pain management and symptom control techniques.

Throughout the time that the patient is under the care of hospice, the nurse keeps the primary physician informed of the patient’s condition.

Nurses provide the complete spectrum of skilled nursing care and are
Oncology Nursing Certification

- AOCNS® (Advanced Oncology Certified Nurse Practitioner)
- AOCNP® (Advanced Oncology Certified Clinical Nurse Specialist)
- AOCN (Advanced Oncology Certified Nurse)

In 2003, ONCC conducted a role delineation study of oncology advanced practice nurses. The results of this study indicated that, although there is a substantial core of knowledge important to both clinical nurse specialists and nurse practitioners in oncology, there are discernable differences in the work responsibilities of oncology clinical nurse specialists and oncology nurse practitioners. Two examinations are needed in order to accurately reflect current advanced practice nursing in oncology.

Are there different eligibility criteria for the AOCNP® and AOCNS® Examinations?

- Yes. Nurses who wish to take the AOCNP® (Oncology Nurse Practitioner) Examination must have:
  - Current, active, unrestricted RN license at the time of application and examination; and
  - Master’s or higher degree in nursing from an accredited institution; and
  - Successful completion of an accredited nurse practitioner program; and
  - Minimum of 500 hours of supervised clinical practice as an oncology nurse practitioner. These hours may be obtained within the nurse practitioner program or following graduation from the program.
Some institutions offer specialist training programs and certification in oncology for nurses. More information about training programs and certification is available through the following organization:

- **Oncology Nursing Society**
  125 Enterprise Dr.,
  Pittsburgh, PA 15275
  [www.ons.org](http://www.ons.org)

- **American Nurses Credentialing Center**
  600 Maryland Ave., SW, Suite 100 West
  Washington, D.C. 20024–2571
  (800) 284–2378

- **American Nurses' Association**
  8518 Georgia Ave.,
  Ste. 400,
  Silver Spring, MD 20910
  [www.nursingworld.org](http://www.nursingworld.org)

---

**Cancer Care: Team Effort**

- Pathology/Molecular diagnosis
- Modern imaging
- Surgery
- Systemic medical treatment
- Radiotherapy
- **Nursing**
- Psychosocial support
- Rehabilitation
- Pharmacy
Evaluation of Patients

- Complete medical history focusing on chief complaint and family history
- Complete physical examination
- Diagnosis and staging:
  - Efficient and cost-effective
  - Use technology to confirm your diagnosis, not to rule it out

Performance Status Scales

<table>
<thead>
<tr>
<th>Karnofsky scale (%)</th>
<th>ECOG scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-complaints: No evidence of dis</td>
<td>10 0</td>
</tr>
<tr>
<td>Able to carry on normal activity: minor signs or sx of dis</td>
<td>90 80</td>
</tr>
<tr>
<td>Care for self: unable to carry on normal activity, requires occasional assistance</td>
<td>70 60</td>
</tr>
<tr>
<td>Requires considerable assistance; Disabled: requires special care</td>
<td>50 40</td>
</tr>
<tr>
<td>Severely disabled: Very sick; Moribund, progressing rapidly</td>
<td>30 20 10</td>
</tr>
</tbody>
</table>
## NCI Common Terminology Criteria for Adverse Events

<table>
<thead>
<tr>
<th>Allergy/Immunology</th>
<th>Auditory/Ear</th>
<th>Blood/Bone Marrow</th>
<th>Cardiac Arrhythmia</th>
<th>Cardiac General</th>
<th>Coagulation</th>
<th>Constitutional Symptoms</th>
<th>Death</th>
<th>Dermatology/Skin</th>
<th>Endocrine</th>
<th>Gastrointestinal</th>
<th>Growth and Development</th>
<th>Hemorrhage/Bleeding</th>
<th>Hepatobiliary/Pancreas</th>
<th>Infection</th>
<th>Lymphatics</th>
<th>Metabolic/Laboratory</th>
<th>Musculoskeletal/Soft Tissue</th>
<th>Neurology</th>
<th>Ocular/Visual</th>
<th>Pain</th>
<th>Pulmonary/Upper Respiratory</th>
<th>Secondary Malignancy</th>
<th>Sexual/Reproductive Function</th>
<th>Surgery/Intra-Operative Injury</th>
<th>Syndromes</th>
<th>Vascular</th>
</tr>
</thead>
</table>

## Grades by CTCAE v3.0

- Grade refers to the severity of the AE.
- The CTCAE v3.0 displays Grades 1 through 5 with unique clinical descriptions of severity for each AE based on this general guideline:
  - Grade 1 Mild AE
  - Grade 2 Moderate AE
  - Grade 3 Severe AE
  - Grade 4 Life-threatening or disabling AE
  - Grade 5 Death related to AE
### Examples of Grades

<table>
<thead>
<tr>
<th>AE</th>
<th>G1</th>
<th>G2</th>
<th>G3</th>
<th>G4</th>
<th>G5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin</td>
<td>&lt;LLN – 10.0 g/dL</td>
<td>&lt;10.0 – 8.0 g/dL</td>
<td>&lt;8.0 – 6.5 g/dL</td>
<td>&lt;6.5 g/dL</td>
<td>Death</td>
</tr>
<tr>
<td>Leukocytes (total WBC)</td>
<td>&lt;LLN – 3000/mm³</td>
<td>&lt;3000 – 2000/mm³</td>
<td>&lt;2000 – 1000/mm³</td>
<td>&lt;1000/mm³</td>
<td>Death</td>
</tr>
<tr>
<td>Neutrophils/ granulocytes (ANC/AGC)</td>
<td>&lt;LLN – 1500/mm³</td>
<td>&lt;1500 – 1000/mm³</td>
<td>&lt;1000 – 500/mm³</td>
<td>&lt;500/mm³</td>
<td>Death</td>
</tr>
<tr>
<td>Platelets</td>
<td>&lt;LLN – 75,000/mm³</td>
<td>&lt;75,000 – 50,000/mm³</td>
<td>&lt;50,000 – 25,000/mm³</td>
<td>&lt;25,000/mm³</td>
<td>Death</td>
</tr>
<tr>
<td>Insomnia</td>
<td>Occasional difficulty sleeping, not interfering with function</td>
<td>Difficulty sleeping, interfering with function but not interfering with ADL</td>
<td>Frequent difficulty sleeping, interfering with ADL</td>
<td>Disabling</td>
<td>—</td>
</tr>
<tr>
<td>Weight loss</td>
<td>5 to &lt;10% from baseline; intervention not indicated</td>
<td>10 – &lt;20% from baseline; nutritional support indicated</td>
<td>≥20% from baseline; tube feeding or TPN indicated</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

### Oncologic Emergencies

- **Cardiopulmonary:**
  - Pericardial effusion and cardiac tamponade
  - Superior vena cava syndrome
  - Airway obstruction

- **CNS:**
  - Spinal cord compression
  - Carcinomatous meningitis

- **GI and Infection related:**
  - Acute diarrheal syndrome
  - Neutropenic enterocolitis
  - Neutropenic fever and sepsis
Oncologic Emergencies

- **Urologic:**
  - Obstructive uropathy
  - Hemorrhagic cystitis—Oxazophosphorine–based alkylating agent

- **Metabolic:**
  - Hypercalcemia
  - Hyponatremia
  - Hypoglycemia
  - Tumor lysis syndrome

- **Adrenal insufficiency**

---

Evaluation and Treatment of Oncologic Emergency

- **Assess acute symptoms and signs**
  - 1. Related to underlying malignancy?
  - 2. Related to treatment?

- **Determine natural history of malignancy**
  - 1. Has a definitive diagnosis been established?
  - 2. What is overall prognosis?

- **Evaluate efficacy of available therapy**
  - 1. Is effective treatment available for the underlying malignancy?
  - 2. Should intervention be directed toward underlying malignancy or acute complication?

- **Determine goals of acute treatment**
  - 1. What is the risk–benefit ratio for treatment of the acute complication?
  - 2. Will prompt palliation preserve or improve quality of life?
New Horizon

- Definition:
- Job description and exploration:
- Accredits:
- Guidelines:
- Status and compensation:
- etc.