

NCCN Clinical Practice Guidelines® Development Process

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Quality Health Care

Quality of health care is the degree to which health services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge.

Institute of Medicine, 1990

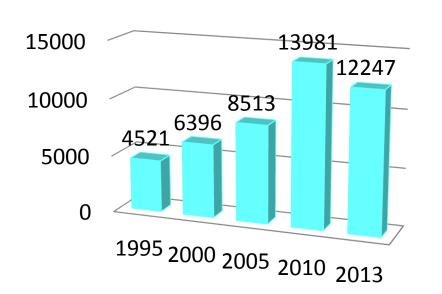
Systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.

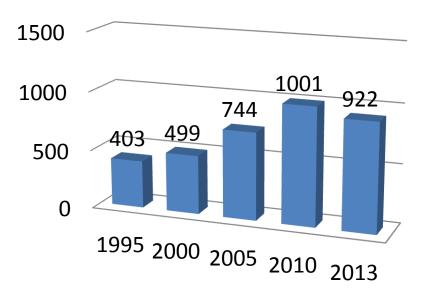
Institute of Medicine, 1990

PubMed Breast Cancer Publications

All Publications

Clinical Trials





Rationale for Guidelines

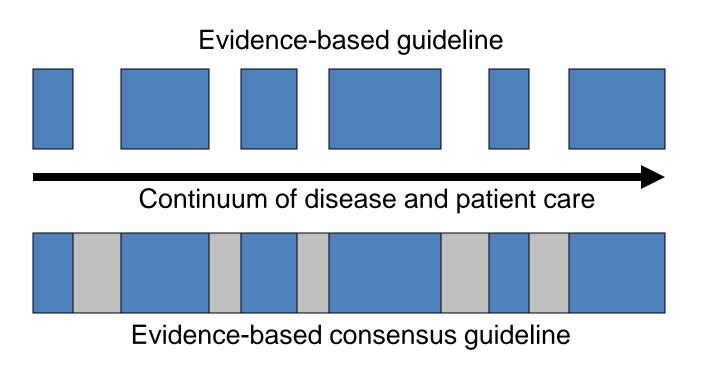
- Evidence evaluated and recommendations made by experts
- Objective, explicit decision making process
- Minimize variation in care
- Provide standard of care for quality of care assessment
- Payers can assess appropriateness of care
- Educational instruments

Characteristics of high quality guideline development process

- Explicit process
- Evidence-based when possible
- Level of evidence identified for each recommendation
- Multidisciplinary panel
- Expert panelists
- Conflicts of interest managed
- Updated frequently
- Logical and follow though processes of users
- Supporting documentation provided



Evidence-based Consensus Allows Comprehensive Guidelines



High-level evidence exists

Gaps in evidence filled with expert consensus

- Standard for clinical care and policy in oncology in United States
- 48 multidisciplinary panels with 25-30 experts per panel
- Estimated 21,000+ hours volunteered by Guidelines Panel Members in 2013
- 59 NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines[®]) with 163 algorithms updated continuously
- Widely available free of charge on the Internet
- Basis for insurance coverage policy and quality evaluation

NCCN Process: Identification of Discussion Items

- Staff literature search for clinical trials reports
- NCCN institutional review
- Panel member review
- Patient advocacy review
- Pharmaceutical industry and payor requests
- Community oncology requests
- Individual recommendations

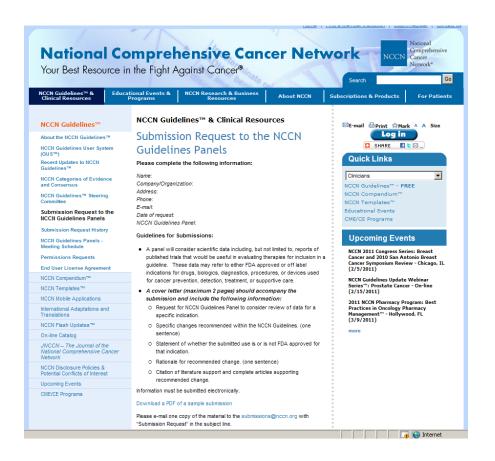


Panel Member Responsibilities

- Manage institutional reviews of guidelines
- Prepare for and participate in panel meetings
- Review draft guidelines
- Participate in development of derivative products
- Respond to availability polls
- Complete COI disclosures semi-annually
 - Clinical trials participation disclosed but not counted against \$\$ thresholds
 - Limits for panel participation: \$20,000 from one source, \$50,000 aggregate from all sources
 - Panel member, spouse, domestic partner, dependents



Submission of Data to Panels



- Institutional Review: Each panel member is responsible for submitting guideline to the disease team at his/her institution
- Submissions from community sites, industry, payers, and the advocacy community:
 - Data submitted to the NCCN (not to individual panel members)
 - Quality of data very important
- Panels review and interpret the data using their expert judgment

Annual Meeting and Update Process

PRE-MEETING

- Identification of new issues
 - Panel chair and members, institutional review, staff, industry, others
- Assignment of issue to specific panelist(s) in advance
- Agenda is circulated in advance of the meeting

AT MEETING

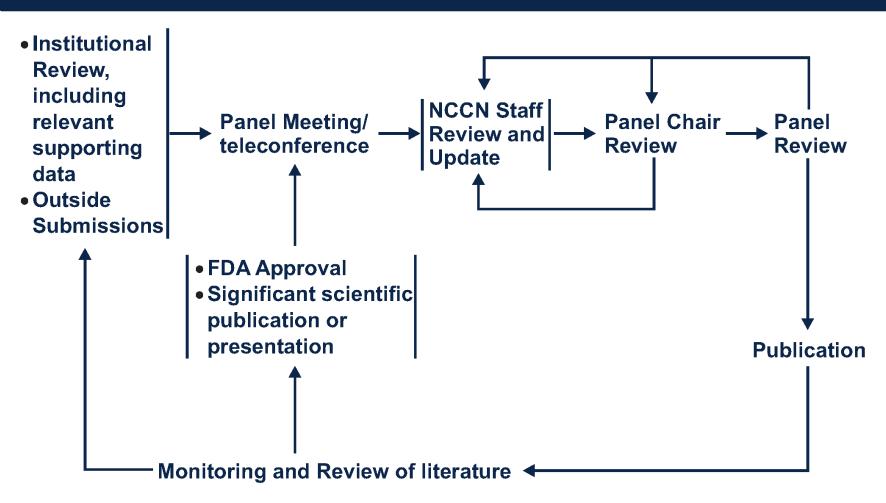
- Disclosure of conflicts of interest
- Formal presentation of evidence by panelist(s) and recommendation
- Discussion by panel
- Decision regarding potential modification

POST-MEETING

- Generation of modified Guideline and supporting documentation
- Dissemination of Guideline



Guidelines Update Process



Concurrent development and production of Discussion, Compendium and Chemotherapy Order Templates

Critical Analysis of Data

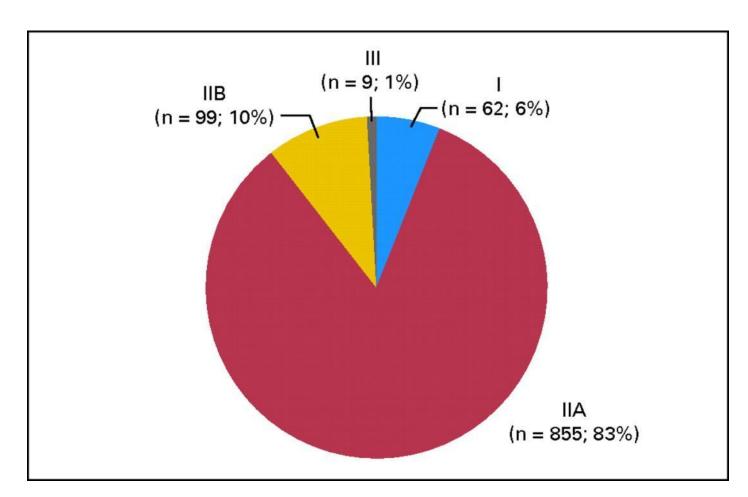
- NCCN Categories of Evidence
 - -1, 2A, 2B, 3
- Quality of evidence
 - Meta analysis/systematic review, RCTs, nonRCTs, clinical experience
- Extent of evidence
 - Extensive, less extensive, little, clinical experience
- Consistency of evidence
 - Highly consistent, single trial, variable data

Categories of Evidence and Consensus

- Category 1: Based upon high-level evidence, there is uniform NCCN consensus ($\geq 85\%$) that the intervention is appropriate.
- <u>Category 2A</u>: Based upon lower-level evidence, there is uniform NCCN consensus ($\geq 85\%$) that the intervention is appropriate.
- <u>Category 2B</u>: Based upon lower-level evidence, there is NCCN consensus (50-85%) that the intervention is appropriate.
- <u>Category 3</u>: Based upon any level of evidence, there is major NCCN disagreement (at least 3 institutions on each side) that the intervention is appropriate.

All recommendations are category 2A unless otherwise noted.

Recommendations by Category

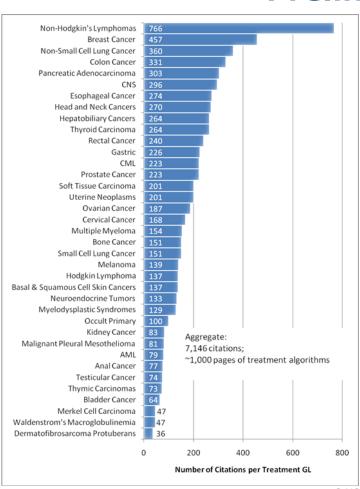


Poonacha T K, Go R S JCO 2011;29:186-191



NCCN Guidelines®

Citations Across Guidelines Preliminary Data



In general:

- More references:
 - Large complicated guidelines
 - Large number of patient cohorts
 - High priority cancers
- Fewer references
 - Lower incidence
 - Few innovations
 - Fewer effective interventions

Minimization of Bias

- Large number of panel members
- Multidisciplinary (e.g., med onc, radiation, surgery, nursing, others) membership
- Geographic diversity
- Different philosophical views represented
- Institutional review
- External review and input: submissions, conferences/symposia, international
- Formal declaration of potential conflicts: verbal/written

NCCN Clinical Practice Guidelines Multidisciplinary Panels

- Medical oncology
- Surgery/Surgical oncology
- Radiation oncology
- Hematology/Hematology oncology
- Bone Marrow Transplantation
- Urology
- Neurology/neuro-oncology
- Gynecologic oncology
- Otolaryngology
- Orthopedics/orthopedic oncology
- Pathology
- Dermatology
- Internal medicine
- Gastroenterology
- Endocrinology
- Diagnostic Radiology
- Interventional Radiology

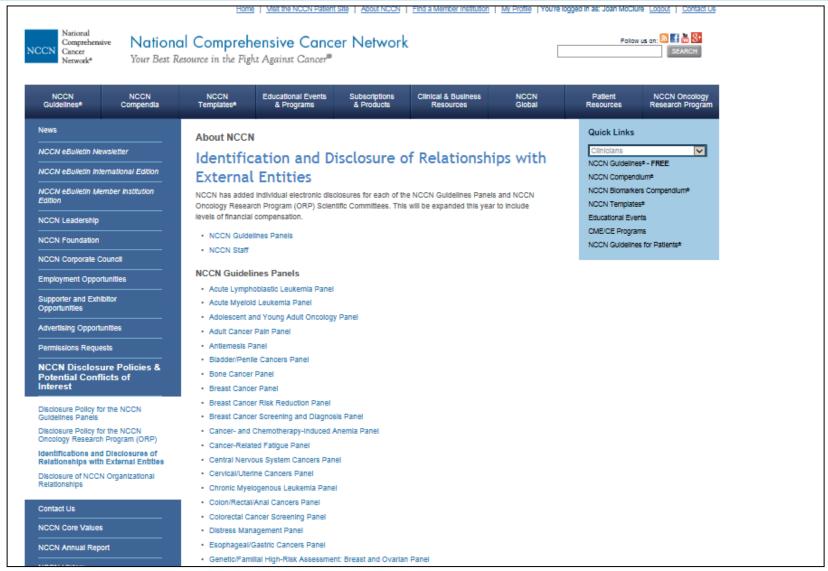
- Nursing
- Cancer genetics
- Psychiatry, psychology
- Pulmonary medicine
- Pharmacology/Pharmacy
- Infectious diseases
- Allergy/immunology
- Anesthesiology
- Cardiology
- Geriatric medicine
- Epidemiology
- Patient advocacy
- Palliative, Pain management
- Pastoral care
- Oncology social work

Conflict of Interest Disclosure

- No industry or any other interest group funds are used to support panel meetings
- No industry representatives allowed at meetings
- Individual panel members disclose conflicts of interest at semi-annually
- Financial conflicts of interest published for individuals on NCCN.org
- Members are excused from deliberations when degree of conflict warrants
- Members with substantial COI are excluded from panels



Disclosure





Panel Member Disclosures



NCCN Transparency Procedures

- Requests for changes in recommendations for drugs and biologics to a guideline are available to the public for a period of not less than 5 years
- A listing of all evidence reviewed or considered
- A listing of all individuals who have substantively participated in the review
- Minutes and voting records of meetings for the review and disposition
- Direct or indirect financial relationships that exist between individuals or the spouse or minor child of individuals who have substantively participated



NCCN Guidelines®

Transparency Documents



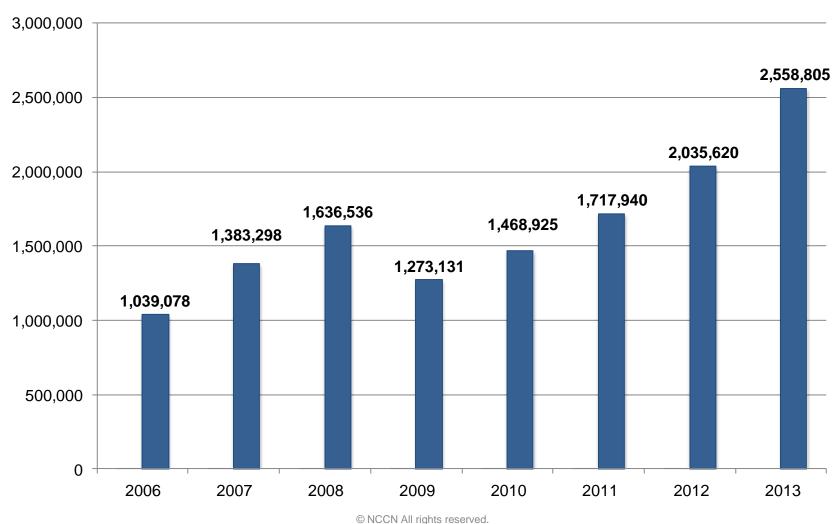
Dissemination of Guidelines

- Algorithms always published with supporting documentation (manuscript)
- Available free of charge via internet (www.nccn.org)
- Released on flash drives
- Published in JNCCN periodically
- Have been translated into multiple languages, including Japanese, Chinese, Spanish
- Selectively available in patient-oriented versions.



NCCN.org

Unique Visitors to NCCN.org

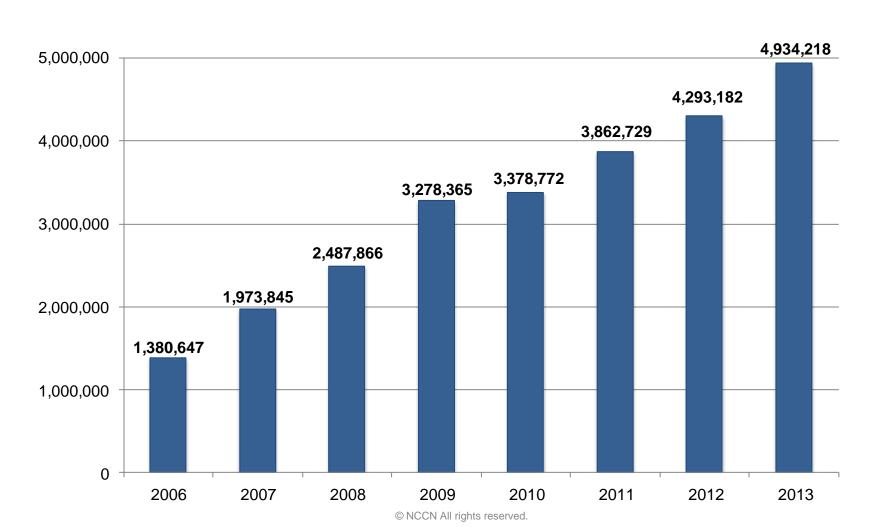




NCCN.org

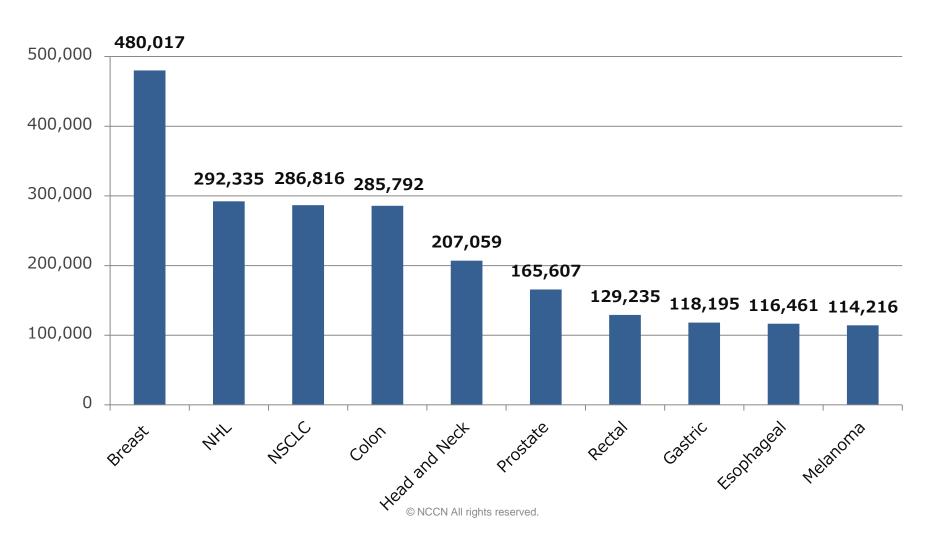
Guideline Downloads

More Than 25 Million Downloads Since 2006





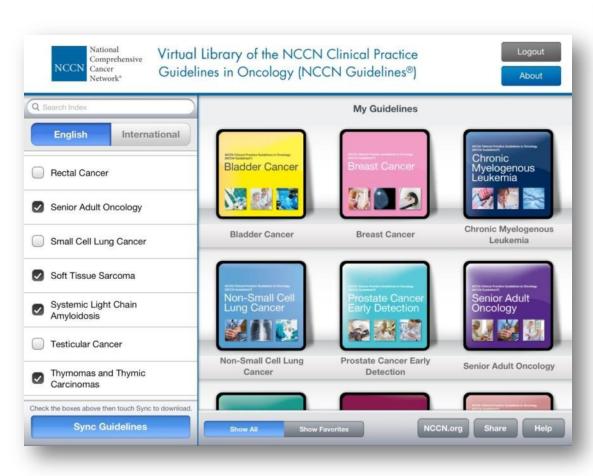
2013 Top 10 Guideline Views





Virtual Library of NCCN Guidelines®

Access the Complete Library, including International Editions and Translations

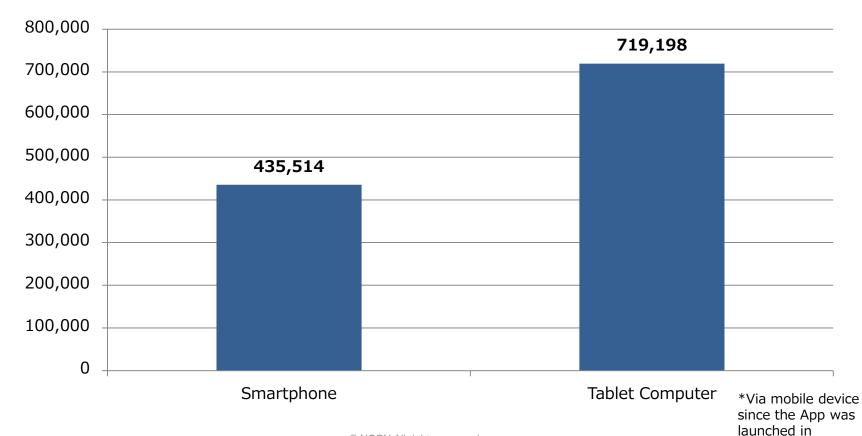






Virtual Library of NCCN Guidelines®

On December 13, 2013, NCCN launched the Virtual Library of NCCN Guidelines® Free App formatted for iPhone and Android Smartphone in addition to the already existing tablet applications, which was launched in September, 2012
More Than One Million Guideline Downloads*



September, 2012



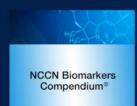
NCCN.org

TOP TEN COUNTRIES: 2013

Country	Web Visits
United States	4,415,769
Spain	147,850
Italy	143,269
Japan	137,239
Brazil	127,248
China	118,877
India	110,317
Canada	109,649
South Korea	90,652
Mexico	78,304







Cáncer de Mama







NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)































Guideline Value Leveraged for Derivative Products

- NCCN Drugs and Biologics Compendium®
- NCCN Biomarkers Compendium[®]
- Licensed to multiple IT organizations for use in computer-based systems
- NCCN Guidelines for Patients®



NCCN Compendium®

- Based directly on NCCN Guidelines
- 228 agents used in cancer care
- NCCN Compendium lists both FDAapproved uses and appropriate uses beyond the FDA-approved label
- Recognized as an authoritative reference for oncology coverage policy
- Used by health care professionals to determine coverage of drugs



NCCN Compendium®

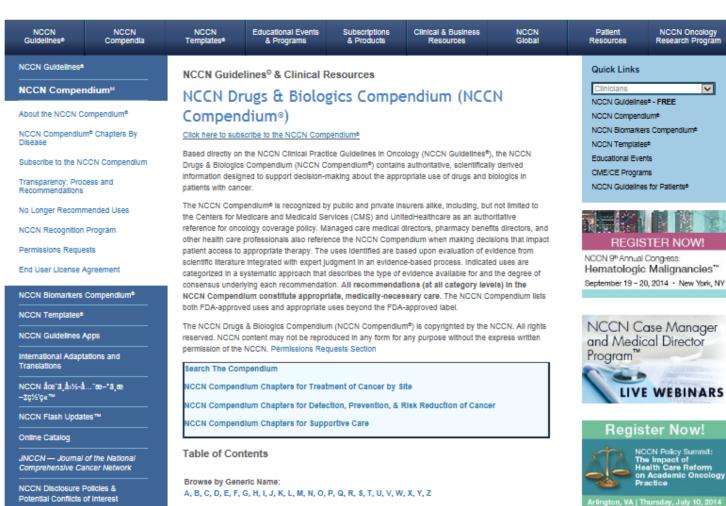


National Comprehensive Cancer Network

Your Best Resource in the Fight Against Cancer®

Search by Generic name:







NCCN Compendium®



NCCN Drugs & Biologics Compendium ®

Ibritumomab tiuxetan



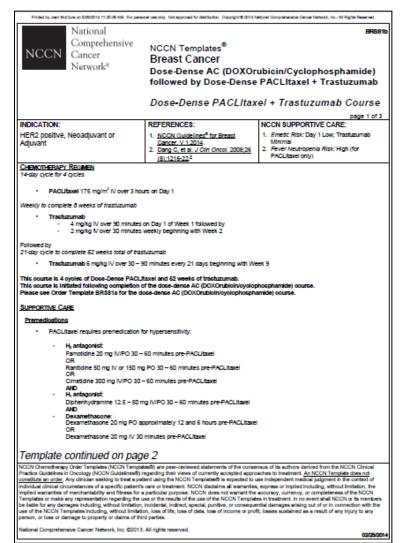
NCCN Disease Indication	Agent	Brand Name(s)	Pharmacologic Class	Route(s)	FDA Disease Indication	ICD-9 Code	NCCN Recommended Use	NCCN Category
IHL - Follicular Lymphoma	lbritumomab tiuxetan	Zevalin®	Antineoplastic radioimmuno-therapeutic anti-CD-20 monocional antibody	IV.	ibritumomab tluxetan is indicated for the treatment of relapsed or refractory low-grade or follocular B-cell non-Hodgins is ymphomat (NHL). Inforthormab thuselan is indicated for the treatment of previously untreated follocular NHL in patients who achieve a partial or complete response to first-line chemotherapy. Consult the full FDA label with particular attention to boxed warning(s).	200.38	First-line radioimmunotherapy alone in elderly or infirm patients with the indications for treatment in the setting of comorbidities where tolerability of combination chemotherapy is a concern; following induction chemotherapy or chemoimmunotherapy as first-line consolidation therapy; or as second-line radioimmunotherapy for refractory or progressive disease in patients with the indications for treatment	1 for radioimmunothera following induction chemotherapy or chemoimmunothe as first-line consolidation therapy; 2A for first line therapy for eld or infirm patients
HHL - Gaetric MALT Lymphoma	ibritumomab tiuxetan	Zevalin ©	Antineoplastic radiolimmuno-therapeutic anti-CD-20 monocional antibody	V	biritumomab titusetan is indicated for the treatment of relapsed or retractory low-grade or followist Fooling-loop show pymphoma (NHL). Ibritumomab tiuxetan is indicated for the treatment of previously untreated followist NHL in patients who achieve a partial or complete response to first-line chemotherapy. Consult the full FDA label with particular attention to boxed warning(s).	200.30-200.38	First-line radioimmunotherapy alone in elderly or infirm patients with the indications for treatment in the setting of comorbidities where tolerability of combination chemotherapy is a concern, or following induction chemotherapy or chemoimmunotherapy as first-line consolidation therapy for stage III _{e-} 1V disease; or as second-line radioimmunotherapy for recurrent or progressive disease in patients with the indications for treatment	1 for radioimmunotheray following induction chemotherapy or chemoimmunother as first-line consolidation thera and for second-line therapy; 2A for first line therapy for or infirm patients
HHL - Nongastric MALT Lymphoma	ibritumomab tiuxetan	Zevalin ©	Antineopiastic radiolimmuno-therapeutic anti-CD-20 monocional antibody		biritumomab tiuxetan is indicated for the treatment of relapsed or refractory low-grade or folioliusir S-oli non-Hodgkins by imphoma (NHL). Ibritumomab tiuxetan is indicated for the treatment of previously untreated folioliusir NHL in patients who achieve a partial or complete response to first-line chemotherapy. Consult the full FDA label with particular attention to boxed warning(s).	200.30-200.38	First-line radioimmunotherapy alone in elderly or infirm patients with the indications for treatment in the setting of comorbidities where tolerability of combination chemotherapy is a concern, or following induction chemotherapy or chemoimmunotherapy as first-line consolidation therapy for stage III-IV disease, or second-line radioimmunotherapy for recurrent stage I-II disease or for progressive disease in patients with the indications for treatment	1 for radioimmunotheray radiowing chemotherapy or chemoimmunother as first-line consolidation thera and for second-line therapy; 2A for first line therapy for eld or infirm patients
HL - Primary Cutaneous B-Cell ymphoma	ibritumomab tiuxetan	Zevalin©	Antineoplastic radioimmuno-therapeutic anti-CD-20 monocional antibody	IV	britumomab tiuxetan is indicated for the treatment of relapsed or refractory low-grade or folicular S-cell non-Hodgkin is ymphoma (NHL), ibritumomab tiuxetan is indicated for the treatment of previously untreated folicular NHL in patients who achieve a partial or complete response to first-line chemotherapy. Consult the full FDA label with particular attention to boxed warning(s).		Radiolimmunotherapy alone, including in elderly or infirm patients with the indications for treatment in the setting of comorbidities where tolerability of combination chemotherapy is a concern, or following induction chemotherapy or chemoimmunotherapy as first-line consolidation therapy for refractory generalized cutaneous or newly diagnosed generalized extracutaneous primary outaneous marginal zon or foliolic center lymphoma or as second-line radioimmunotherapy for refractory generalized cutaneous disease or relapsed generalized extracutaneous disease in patients with the indications for treatment.	chemotherapy or chemoimmunother as consolidation
HL - Spienic Marginal Zone Lymphom	na ibritumomab tiuxetan	Zevalin⊕	Antineopiastic radioimmuno-therapeutic anti-CD-20 monocional antibody	IV	britumomab tluxetan is indicated for the treatment of relapsed or jefractory low-grade or follicular 8-cell non-Hodgkin's hymboral (NHL). Infortmomab tluxetan is indicated for the treatment of previously untreated follicular NHL in patients who achieve a partial or complete response to first-line chemotherapy. Consult the full FDA label with particular attention to boxed warning(s).	200.30-200.38, V10.79	For progressive disease following initial treatment for splenomegaly in patients with the indications for treatment as • first-line radioimmunotherapy alone in elderly or infirr patients with the indications for treatment in the setting of comorbidities where tolerability or combination chemotherapy is a concern or following induction chemotherapy is or chemoimmunotherapy as first-line consolidation therapy.	1 for radioimmunotheray following nchemotherapy for first-line consolidat therapy and for second-line therap

The MOON Drugs & Biologic Compendium (NOX Compendium(b) is copyrighted by the National Comprehensive Cancer Network). It is not to be a served at 2014. The MOON Compendium (b) is reported to the special control of the Notice of Notice (b) is reported to use included in larger treatment mental or of Notice (b) in the Notice of Notice (b) is reported to use included in larger treatment mental or of Notice (b) is reported to use included in larger treatment mental or of Notice (b) is reported to use included in larger treatment mental or of Notice (b) is reported to use included in larger treatment mental or of Notice (b) is reported to use included in larger treatment mental or of Notice (b) is reported to use individual clinical circumstances to determine any patient's care or treatment.



NCCN Templates®

- Helps clinicians administer regimens and agents in the NCCN Guidelines and Compendium safely and effectively
- References NCCN
 Guidelines and relevant
 studies
- Includes emetic risk and FN risk from NCCN Guidelines, monitoring and cautions etc
- NCCN currently has 1041 posted templates
- NCCN is developing electronic-facing interface



NCCN Biomarkers Compendium™

Launched December 1, 2012

- Goal: To ensure access to appropriate testing as recommended by NCCN Guidelines
- Identify the utility of a biomarker to screen, diagnose, monitor, or provide predictive or prognostic information
- Use broad definition
- Identify biomarkers that affect treatment decisions and can divide patients into clinically relevant subgroups
- Consider the biologic activity not the specific test
- Widespread availability of reliable testing

NCCN Biomarkers Compendium™

Test Detects	Number of Recommendations	Number of unique entities (gene symbols, rearrangements, translocations, etc
Protein/Protein Expression (includes flow/IHC)	558	112
Translocation	105	64
Mutation	87	36
Chromosome deletion, abnormality, trisomy, inversion, complex alteration, etc. ¹	50	
Gene rearrangements	40	10



Search

NCCN National Comprehensive Cancer Network* NCCN Biomarkers Cornel National NCCN Report National National NCCN Report National National NCCN Report National Nati	mpendium®			Printed by Joan McClure on 5/28/2014 2:28:47 PM. For personal use only. Not appror The NCCN Biomarkers Compendium® is copyrighted by the National Comprehensive Cancer Netw About the NCCN Biomarkers Compendium®
→ OPTIONS				
Use the drop-down menus to search the database:	Select fields	to display:		
Guideline: Non-Small Cell Lung Cancer (NSCLC Disease: Please choose one Molecular Abnormality: Please choose one Gene Symbol: ALK Show All Records Reset Filters Print	▼	Detects	Test Page with Recommendation	
Search: Q				
Disease Description	Molecular Abnormality	Gene NCCN Category ombol Of Evidence	•	NCCN Recommendation: Clinical Decision
□ Non-Small Cell Lung Cancer (NSCLC) ALK ge	ene rearrangement ALI	.K 1	 ALK testing (category 1) 	isease: Adenocarcinoma, Large Cell, NSCLC not otherwise specified (NOS) conducted as part of multiplex/ next generation sequencing
□ Non-Small Cell Lung Cancer (NSCLC) ALK ge	ene rearrangement ALI	LK 2A		isease: Squamous cell carcinoma. .K testing especially in never smokers or small biopsy specimens, or mixed histology conducted as part of multiplex/next-generation sequencing
The NOON Biomarkers Compendium [®] is copyrighted by the National Comprehensive Cancer Network, related use and indication for biomarker lesting. Any clinician seeking to apply or consult the NOON Biomarker.	inc. All rights reserved. © 2014. The NOON Blom markers Compendium [®] is expected to use Indep	narkers Compendium [®] and the illustrations herein endent medical judgment in the context of individ	may not be reproduced in any form without the express all clinical circumstances to determine any patient's care	written permission of NOCN. The NOCN Blomarkers Compendium [®] neither represents an all-inclusive listing of blomark

NCCN Informatics Collaborations

- Active Health
- Advocate Healthcare
- CareCore National, LLC
- Computer Sciences Corporation
- Corporate Care Management
- DK Pierce & Associates, Inc.
- DNA Direct
- Epocrates
- eviti
- Equicare Health
- Genospace
- Hines
- IBM Watson
- Interlink
- inVentiv

- Ion
- Magellan Health
- McKesson Health Solutions
- McKesson Specialty Health
- New Century Health
- Oncology Analytics
- On Q Health
- Optum
- Patients with Power
- Prime Therapeutics
- Presence Health
- Rush University Medical Center
- Skyscape
- UnitedHealthCare
- Zynx Health Inc.

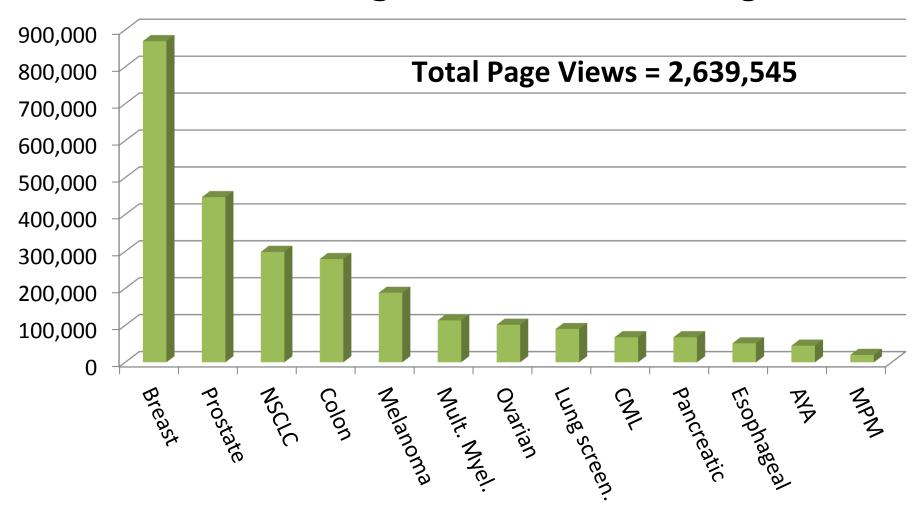


NCCN Guidelines for Patients®



NCCN Guidelines for Patients®

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NCCN Process: Identification of Discussion Items

- Staff literature search for clinical trials reports
- NCCN institutional review
- Panel member review
- Patient advocacy review
- Pharmaceutical industry and payor requests
- Community oncology requests
- Individual recommendations

- Evidence-based consensus process for development
- Multidisciplinary panels
- Multiple sources of input of information to be considered
- Conflicts of interest tightly managed
- Make recommendations across the continuum of care
- Continuously updated
- Define the standard of cancer care and coverage within the USA
- Basis of multiple NCCN programs and initiatives