The behavior of a tumor is the way in which it acts within the body. The behavior code is the fifth digit of the morphology code. A recent ASCR quality review of breast cancer cases revealed opportunities for improvement in distinguishing between the use of behavior codes 2 (in situ) and 3 (malignant).

Behavior code 2, which is noninvasive, means that the tumor is malignant, but still growing in place. Synonyms for carcinoma in situ (behavior code 2) are: noninfiltrating, intraductal, lobular carcinoma in situ, Stage 0, noninvasive, no stromal involvement, papillary intraductal, papillary noninfiltrating, intracyctic, lobular neoplasm, lobular noninfiltrating, confined to epithelium, intraepithelial and intraepidermal percent of all. When only these descriptions are present, assigning the right code is done with relative ease. Difficulties arise when the description is expanded to include an invasive process which is assigned a behavior code of 3 (malignant). When coding single tumors:

1. Code the histology if only one type is mentioned in the pathology report.
   Example:
   Comedocarcinoma, UOQ right breast
   Code 8501/3 Comedocarcinoma

2. Code the invasive histology when both invasive and in situ are present.
   Example:
   Right breast tumor, tubular carcinoma with lobular carcinoma in situ
   Tubular carcinoma 8211/3
   Lobular carcinoma in situ 8520/2

   Code 8211/3 Tubular carcinoma

   When invasion or micro invasion is present, regardless of the degree, the behavior of the tumor is always coded as 3 (malignant). If the specimen is from a metastatic site, code the histology of the metastatic site and code 3 for behavior. Instruction for coding the behavior of tumors is found in F.O.R.D.S, pages 94-95.

   Listed below are two example of invasive tumors found to be miscoded as in situ processes:
   - Biopsy rt breast: DCIS, Comedo type, high grade w/microinvasion.
   - Isolated focus of infiltrating mammary lobular carcinoma with focal signet ring cell features.

   Exception

   If the histology of the invasive component is an ‘NOS’ term (e.g., carcinoma, adenocarcinoma, melanoma, sarcoma), then code the histology of the specific term associated with the in situ component and an invasive behavior code.

   Example:
   Carcinoma and in situ ductal carcinoma, single lesion right UOQ breast
   Carcinoma, NOS 8010/3
   In situ ductal carcinoma 8500/2
   Code 8500/3 Infiltrating duct Carcinoma

   Close attention should be given to the final diagnosis recorded on the pathology report to ensure that correct histology is coded. When in doubt you should always query the pathologist.

CONGRATULATIONS NEW ALABAMA CTR’S

- **Joanne Powers**
  Flowers Hospital

- **Silvia Ramsey**
  Regional Medical Center

- **Briana McCants**
  Jackson Hospital

- **Judy Smith**
  University of Alabama

- **Karen Moulds**
  Mobile Infirmary
1. Forty-one participants turned in an evaluation form. Of those, 16 participated in the pre-workshop interviews. Of those 16, 75% (12) said they strongly agreed the interview was an effective way to identify issues and 19% (3) agreed. One did not mark a response on this question. Of the 16, 81% (13) strongly agreed they felt free to express themselves and 19% (3) agreed.

2. Of the 25 respondents that were not interviewed, 48% (12) strongly agreed the summary included the right issues and 44% (11) agreed it included the right issues. One person (4%) strongly disagreed.

3. The facilitator was effective in bringing the group to consensus. 61% (25/41) strongly agreed 37% (15/41) agreed 2% (1/41) had no opinion

4. At the beginning of the workshop you were apprehensive or cynical about the process. 5% (2/41) strongly agreed 29% (12/41) agreed 24% (10/41) had no opinion 24% (10/41) disagreed 15% (6/41) strongly disagreed

5. A positive environment was set by the opening exercise. 54% (22/41) strongly agreed 44% (18/41) agreed 2% (1/41) had no opinion

6. You prefer to problem solve with a small group 37% (15/41) strongly agreed 51% (21/41) agreed 2% (1/41) had no opinion 10% (4/41) disagreed

7. You felt comfortable working in a small group. 46% (19/41) strongly agreed 50% (21/41) agreed

8. Your input was important to the group. 34% (14/41) strongly agreed 56% (23/41) agreed 7% (3/41) had no opinion 2% (1/41) disagreed

9. You have a greater understanding of the issues identified by other participants. 49% (20/41) strongly agreed 49% (20/41) agreed 2% (1/41) had no opinion

10. You are satisfied with the action steps the group agreed to take. 34% (14/41) strongly agreed 66% (27/41) agreed

F.O.R.D.S CODING CLARIFICATIONS

Delayed planned first course treatment. Use treatment codes 88 and dates of 88888888, as defined in FORDS, to indicate planned treatment that has not yet been given (or until follow-up confirms whether the planned treatment was given), and use those codes as a flag to record treatment details at the next follow-up. Because the ‘8s’ serve as ticklers to check treatment details once planned first course treatments have been completed, those codes should be changed (to unknown or not given, depending on the circumstances) if the cancer progresses or recurs or the patient dies, if not further follow-up treatment information is obtained.

Cancer Status and Type of First Recurrence These two follow-up items describe related aspect of the patient’s progress and share a tight logical inter-relationship. A standard edit which should be available in registry software now check that:

If Type of First Recurrence = 00 (never cancer-free, then Cancer Status must =00
If Type of First Recurrence =70 (never cancer-free,) then Cancer Status must =2.

The new edit applies to cases with a Date of Last Contact of January 1, 2006. The edit is part of the NCDB10E edit metafile, and registrars who resubmit cases now may see the edit for inconsistent cases. However, because the edit takes effect after most facilities have already completed their NCDB Call for Data submissions, the edit will not be scored now, and failing it will not affect the facility Approval rating. It will be scored in future Calls for Data.

Class Of Case 0 patients diagnosed in 2006—Beginning with cases diagnosed in 2006, neither follow-up nor physician AJCC staging will be required. In order to confidently assign Class of Case 0, it may be necessary to track patients long enough to be assured that the treatment plan included treatment to be administered elsewhere and that the patient went to another facility after diagnosis.
Where do the ideas for trials come from?
The ideas for clinical trials often originate in the laboratory. Researchers develop a clinical trial protocol (the plan for a trial) after laboratory studies indicate the promise of a new drug or procedure.

What is a protocol?
Every trial has a person in charge, usually a doctor, who is called the protocol chair or principal investigator. Phase I and phase II studies generally refer to the person in charge as the principal investigator. Phase III studies generally have a protocol chair, under whose direction multiple principal investigators carry out the protocol in participating sites. The protocol chair or principal investigator prepares a plan for the study, called a protocol. The protocol explains what the study will do, how it will be carried out, and why each part of the study is necessary. For example, the protocol includes:

- The reason for doing the study
- How many people will be in the study
- Who is eligible to participate in the study
- What study drugs participants will take, if any
- What medical tests they will have, if any, and how often
- What information will be gathered

Every doctor or research center that takes part in the trial uses the same protocol. This ensures that patients are treated identically no matter where or if they are receiving treatment, and that information from all the participating centers (if there is more than one) can be combined and compared.

Who sponsors clinical trials?
Clinical trials are sponsored by organizations or individuals who are seeking better treatments for cancer or better ways to prevent or detect cancer. Individual physicians at cancer centers and other medical institutions can sponsor clinical trials themselves. The National Cancer Institute (NCI) sponsors a large number of clinical trials. The NCI has a number of programs designed to make clinical trials widely available in the United States. Thousands of investigators at over a thousand sites participate in various aspects of NCI's clinical trials programs.

What are the different types of clinical trials?

- Treatment trials test new treatments (like a new cancer drug, new approaches to surgery or radiation therapy, new combinations of treatments, or new methods such as gene therapy).
- Prevention trials test new approaches, such as medicines, vitamins, minerals, or other supplements that doctors believe may lower the risk of a certain type of cancer. These trials look for the best way to prevent cancer in people who have never had cancer or to prevent cancer from coming back or a new cancer occurring in people who have already had cancer.
- Screening trials test the best way to find cancer, especially in its early stages.
- Quality of Life trials (also called Supportive Care trials) explore ways to improve comfort and quality of life for cancer patients.

What are the phases of clinical trials?
Most clinical research that involves the testing of a new drug progresses in an orderly series of steps, called phases. This allows researchers to ask and answer questions in a way that results in reliable information about the drug and protects the patients. Clinical trials are usually classified into one of three phases:

- Phase I trials: These first studies in people evaluate how a new drug should be given (by mouth, injected into the blood, or injected into the muscle), how often, and what dose is safe. A phase I trial usually enrolls only a small number of patients, sometimes as few as a dozen.
- Phase II trials: A phase II trial continues to test the safety of the drug, and begins to evaluate how well the new drug works. Phase II studies usually focus on a particular type of cancer.
- Phase III trials: These studies test a new drug, a new combination of drugs, or a new surgical procedure in comparison to the current standard. A participant will usually be assigned to the standard group or the new group at random (called randomization). centers nationwide.

For more information: http://www.cancer.gov/clinicaltrials/learning
Pancreas Anatomy

An elongated gland of 7-8 inches positioned horizontally behind the lower portion of the stomach, the pancreas creates multiple substances essential to converting the food we eat into fuel for the body's cells. The pancreatic exocrine glands produce enzymes that digest food products including proteins, fat, and carbohydrates. These enzymes are secreted into a system of ducts located in the pancreas. The endocrine islets of Langerhans, usually referred to as islets, are tiny clusters of cells scattered throughout the pancreas. Islet cells produce hormones including insulin, glucagon, and somastatin that are essential to metabolizing carbohydrates and regulating blood sugar.

Diagnostics

ERCP is an X-ray visualization of the ducts leading from the pancreas and gallbladder used to diagnose the presence of stones or tumors in these ducts. To prepare for the test, the patient is asked to fast for 12 hours and is usually given a sedative or tranquilizer at the start of the procedure. A local anesthetic in spray or gargle form is used to suppress gagging and causes the patient to lose some control of saliva. A mouth guard may be inserted to protect the teeth. In this procedure, which lasts about an hour, a long, flexible tube known as an endoscope is inserted into the mouth and down the throat while the patient swallows to help pass it down the esophagus. Guided by fluoroscopic X-ray imaging, the doctor passes the endoscope into the stomach and duodenum (the first part of the small intestine). A drug is injected into the duodenum to relax it. Next, a contrast medium is injected through the endoscope and a series of X-rays is taken. Another set of X-rays may be taken from another position once the endoscope is removed. The patient may feel side effects from the drug or hormone used to relax the duodenum and from the contrast medium. These include nausea, hives, blurred vision, dry skin retention, and a feeling of burning or flushing. The throat may be sore for several days afterward. ERCP may also be used for follow up examination of endoscopic sphincterotomy or other therapeutic procedures.

Surgery

Columbia surgeons use several different techniques for removing pancreatic tumors, involving removal of parts of the pancreas. Distal Pancreatectomy involves removal of the tail of the pancreas, or the tail plus a portion of the body. The spleen is sometimes removed as well. Total Pancreatectomy removes the entire pancreas, and is rarely used.

The most common pancreatic cancer operation is the Whipple Procedure. Developed at Columbia in the 1930s, the Whipple procedure is today used throughout the world to treat otherwise inoperable tumors and ailments of the pancreas. The Whipple procedure may be performed for non-pancreatic cancers such as those that arise in the ampulla of vater, duodenum, or distal bile duct, and on rare occasions for chronic pancreatitis. The procedure involves removal of the head of the pancreas and sometimes the body of the pancreas as well. It also removes the lower portion of the stomach, the entire duodenum (first part of the small intestine), and lymph nodes near the pancreas. The gallbladder and part of the common bile duct are removed and the remaining bile duct is attached to the small intestine so that bile from the liver can continue to enter the small intestine. Long term results for the Whipple procedure indicate a five-year survival rate for pancreatic cancer of about 20%.

Chemotherapy

The most commonly used drugs used for treating pancreatic cancer, are gemcitabine (Gemzar®), docetaxel (Taxotere®), cis-platinum (Platinol®), 5-fluorouracil (5-FU), and mitomycin C.

Find more on the web at: http://www.columbiasurgery.org/pat/pancreas/cancer.html
<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>ANSWERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is ductal adenocarcinoma of the distal pancreas directly invading nodes considered metastasis in regard to the N classification?</td>
<td>Yes. Direct invasion of lymph nodes is considered part of the N classification</td>
</tr>
<tr>
<td>An adenocarcinoma of the ampulla of vater the ampulla only, but penetrates through the sphincter of Oddi to involve the mucosa/submucosa on the outer surface of the ampulla. Is this a T2 because it penetrates the sphincter of Oddi or a T1 because it is confined to the ampulla? Also, the definition of T2 states &quot;Tumor invades duodenal wall.&quot; What is meant by &quot;wall&quot;; i.e., what part(s) of the duodenum constitutes the &quot;wall&quot;?</td>
<td>If the tumor goes beyond the ampulla and sphincter and doesn't reach the pancreas, it is a T2. I'd consider the duodenal wall anything beyond the sphincter (submucosa, muscularis propria or adventitia).</td>
</tr>
<tr>
<td>A patient with pancreatic cancer, infiltration of adipose tissue anterior to the pancreas is T2 or T3? Metastasis in paraaortic lymph nodes are pN1 or pM1?</td>
<td>Infiltration of adipose tissue anterior to the pancreas is T3. Para-aortic node tumor is M1/pM1.</td>
</tr>
<tr>
<td>Is celiac plexus block (alcohol injection) for pain management coded as other treatment for a pancreatic primary</td>
<td>Nerve block for pain management would be coded 4 under &quot;palliative care&quot; only.</td>
</tr>
<tr>
<td>A patient was diagnosed with unresectable pancreatic cancer, determined by an attempted Whipple procedure. operative report stated portal vein was wrapped around in the mass and there was no separation. The mass was toward the celiac trunk area. Is it a T3 or T4? Is a pt diagnosed with an unresectable tumor staged T4?</td>
<td>Since the pancreatic cancer is unresectable, use T4.</td>
</tr>
<tr>
<td>Is a Whipple procedure for pancreas cancer coded as (70) extended pancreatoduodenectomy</td>
<td>Yes, use code 70 in the Surgical Procedure of the Primary Site field</td>
</tr>
<tr>
<td>If the primary site is overlapping pancreas, head and body (C25.8), which CS extension code is used for metastasis to left lobe of liver?</td>
<td>Page 319 of the CS manual indicates CS ext code 45 if this is contiguous extension from the tumor, otherwise, it would be coded under CS mets at dx on page 321.</td>
</tr>
<tr>
<td>A pathologist confirmed the histology of ductal adenocarcinoma of the pancreas, yet the ICO-3 book assigns the histology only to primary sites of the breast and it is listed as an acceptable histology for pancreas in the AJCC (p160). Please explain the contradictions and the protocol for resolving issues.</td>
<td>This is a default answer in the ICD-O-3, it doesn't mean it doesn't apply to other sites. Since the histology involves the pancreas, use the code. Refer to Rule H, page 21 and Coding Guidelines, pages 32-33.</td>
</tr>
<tr>
<td>How is &quot;uncinate process of the pancreas&quot; coded in topography and which pancreatic subsite is it coded to?</td>
<td>Uncinate process is the part of the head of pancreas that hooks behind the portal vein. Code to C25.0.</td>
</tr>
</tbody>
</table>
**STATISTICALLY SPEAKING**
ALABAMA STATEWIDE CANCER REGISTRY DATA

**Pancreatic Cancer Incidence Trends 1999-2004**

<table>
<thead>
<tr>
<th>Year</th>
<th>Black Males</th>
<th>White Males</th>
<th>Black Females</th>
<th>White Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PC</td>
<td>41</td>
<td>10.2</td>
<td>34</td>
<td>3.2</td>
</tr>
<tr>
<td>Total APC</td>
<td>-7.2*</td>
<td>1.1</td>
<td>-7.8</td>
<td>-1.6</td>
</tr>
<tr>
<td>1999 Rate</td>
<td>17.8</td>
<td>11.1</td>
<td>15.6</td>
<td>8.7</td>
</tr>
<tr>
<td>2000 Rate</td>
<td>15.8</td>
<td>11.7</td>
<td>10.9</td>
<td>8.6</td>
</tr>
<tr>
<td>2001 Rate</td>
<td>13.7</td>
<td>11.6</td>
<td>11.0</td>
<td>9.5</td>
</tr>
<tr>
<td>2002 Rate</td>
<td>14.6</td>
<td>10.7</td>
<td>10.8</td>
<td>8.2</td>
</tr>
<tr>
<td>2003 Rate</td>
<td>14.8</td>
<td>11.6</td>
<td>9.3</td>
<td>7.9</td>
</tr>
<tr>
<td>2004 Rate</td>
<td>10.5</td>
<td>12.2</td>
<td>10.3</td>
<td>8.4</td>
</tr>
</tbody>
</table>

Source: ASCR 2006. All rates are age-adjusted to the 2000 US (20 age groups) Standard.
* This APC is significantly different from zero (p<0.05).

**Pancreatic Cancer Incidence Rates Black Females 1999-2004**

<table>
<thead>
<tr>
<th>Year</th>
<th>Age-adjusted rate/100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>15.6</td>
</tr>
<tr>
<td>2000</td>
<td>10.9</td>
</tr>
<tr>
<td>2001</td>
<td>11.1</td>
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<td>2002</td>
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</tr>
<tr>
<td>2003</td>
<td>9.5</td>
</tr>
<tr>
<td>2004</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Source: ASCR 2006. All rates are age-adjusted to the 2000 US (20 age groups) Standard.

**Pancreatic Cancer Incidence Rates White Males 1999-2004**

<table>
<thead>
<tr>
<th>Year</th>
<th>Age-adjusted rate/100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>8.7</td>
</tr>
<tr>
<td>2000</td>
<td>8.6</td>
</tr>
<tr>
<td>2001</td>
<td>9.5</td>
</tr>
<tr>
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<td>8.3</td>
</tr>
<tr>
<td>2003</td>
<td>8.4</td>
</tr>
<tr>
<td>2004</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Source: ASCR 2006. All rates are age-adjusted to the 2000 US (20 age groups) Standard.

**Pancreatic Cancer Incidence Rates White Females 1999-2004**

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<thead>
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<th>Year</th>
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<td>2004</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Source: ASCR 2006. All rates are age-adjusted to the 2000 US (20 age groups) Standard.

**Conclusions**

- During the years 1999 to 2004 there was a significant decrease in the incidence rate of pancreatic cancer in black males (Total APC -7.2).
- Although not shown to be statistically significant, a decrease was seen in the incidence rate of pancreatic cancer in black females (Total APC -7.8).
- The incidence rate of white males (Total APC 1.1) and of white females (Total APC -1.6) for pancreatic cancer remained relatively constant during this time.
Pathology reports usually contain the following elements:

1. **Clinical Information** (may also be called "clinical history" or "clinical diagnosis") Where the tumor is found and the type of biopsy procedure performed to remove the tissue. A biopsy is the removal and examination of a tissue sample from the tumor to determine if it is cancerous. Biopsies can be done in several ways depending on the size and location of the tumor. In addition, this section often describes the doctor's impressions of the cancer process before the biopsy information is available.

2. **Specimen** This section tells if the tissue samples came from the breast, lymph nodes (axillae), or both. It also refers to the margin, or area of normal-appearing tissue around the tumor.

3. **Gross Description** The size, weight, and color of each sample. The size, measured in centimeters (cm), will help determine the stage of breast cancer.

4. **Microscopic Description** This section describes in depth the size and type of cells found in the tissue sample.

   4.1 **Histologic Type** refers to whether cells are benign (noncancerous) or malignant (cancerous). It also refers to whether the cancer is invasive or noninvasive. Invasive cancer grows into (invades) normal tissues within the breast and can also spread to other parts of the body. There are different types of invasive breast cancer. Invasive ductal carcinoma (IDC) is the most common. Noninvasive cancer has not spread beyond the milk ducts or milk lobules. The most common type of noninvasive breast cancer is ductal carcinoma in situ (DCIS).

   4.2 **Histologic Grade**—This compares the cancer cells’ abnormalities to normal cells. There are three cancer grades:

   - **Grade 1** (low-grade or well-differentiated) These cancer cells are fairly similar to normal cells. They usually progress slowly.
   - **Grade 2** (intermediate/moderate-grade or moderately differentiated) These cancer cells are somewhat different from normal cells. They progress more quickly than normal cells.
   - **Grade 3** (high-grade or poorly differentiated) These cancer cells look much different than normal cells. They progress quickly.

4.3 **Margins** refers to the area of normal-appearing tissue around the tumor. When the tissue sample is removed, the surgeon removes an extra area, or "margin," of normal-appearing tissue around it. This is done to help make sure that all cancer cells have been removed.

   - **Negative margins** means no cancer cells were found in the normal-appearing tissue around the tumor. Usually, no more surgery is needed.
   - **Positive margins** means cancer cells were found in the normal-appearing tissue around the tumor. More surgery may be needed.

4.4 **Lymphatic Invasion** Describes cancer cells invading into and present within the lymphatic channels that connect to other parts of the body.

5. **Special Tests and Markers** this section describes any additional tests that were performed. The results of tests may help the doctor know how best to treat the cancer. Two in particular that are used for breast cancer are hormone receptor status and HER2 status.

   5.1 **Hormone Receptor Status** Breast cancer cells that have hormone receptors are called "ER-positive" (estrogen receptor-positive) or "PR-positive" (progesterone receptor-positive). Breast cancers that are either ER-positive or PR-positive, or both (HR-positive), can be treated with medicine that reduces the estrogen in the body, or keeps estrogen away from the receptors. Depending on the report, you may see results written as simply "positive" or "negative," as a percent (the number of cells that have receptors out of 100 cells tested), or as a number between 0 and 3.

   5.2 **HER2** status (may also be called "HER2/neu status") HER2 is a protein on breast cancer cells. Some breast cancer cells make too much of this protein and tend to grow quickly. The presence of HER2 is also associated with an increased risk of the cancer spreading. However, there are treatment options specific to HER2 status that should be discussed with the doctor. The report will state whether the patient is HER2-positive or HER2-negative. HER2-positive cancers may respond well to treatment that targets the HER2 protein.

6. **Final Diagnosis** A brief summary of the important findings related to your particular breast cancer.

2007 NEW DATA ITEMS CLARIFIED

The new histology and multiple primary rules developed largely by SEER were endorsed for use beginning in 2007, along with five new data items. These items are:

- Ambiguous Terms
- Date of Conclusive Dx
- Multiple Tumors Reported as One Primary
- Date of Multiple Tumors
- Multiplicity Counter

Clarification

The five above listed data items are not required by the Alabama Statewide Cancer Registry to be collected or transmitted.