RR Registrar Review

Vol. 3, No. 2 Quarterly Newsletter of the Virginia Cancer Registry Summer 1999

Welcome to the Summer 1999 edition of the REGISTRAR REVIEW (RR), the quarterly newsletter of the Virginia Cancer Registry (VCR). We remind all readers of our aim that the content of this newsletter address current and changing needs of cancer control and prevention stakeholders in Virginia. Therefore, we welcome any and all comments, criticisms and suggestions on how the RR can continue to meet the dynamic needs of Virginia's cancer reporting system. If you have comments, please do not hesitate to let us know by contacting the VCR at:

Virginia Department of Health
Virginia Cancer Registry
P.O. Box 2448, Room 114
1500 East Main Street
Richmond, VA 23218

(804) 786-1668 phone
(804) 371-4061 fax

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment
www.vdh.state.va.us

VCR Conference A Success

The 1999 Virginia Cancer Registry Annual Training Conference took place April 22-23, 1999, at the Holiday Inn – Crossroads in Richmond. We designed the agenda to meet a variety of needs and interests, to provide participants with knowledgeable speakers, and to enable registrars to earn CEU's in a comfortable and convenient venue. Overall, participants seemed to feel we accomplished our goals! Highlights begin on page 2.

Thanks to everyone who took the time to fill out the evaluation forms. We have already made great use of your comments, and they will guide the planning for next year's meeting. Individual speakers received your feedback on their presentations, and we also provided your comments to the hotel meeting staff.

Additionally, your suggestions have led to the following resolutions for our Year 2000 conference: (1) greater planning in the room layout, with special attention to comfort and accessibility, (2) presentations planned and scheduled with sufficient time available for last-minute changes, and (3) an attempt to obtain handouts from all speakers. We will also consider having the conference end earlier on Friday, this would translate into fewer CEUs being awarded through NCRA. **If you have thoughts on this, please let the VCR know which way you would like this handled.**

In This Issue:

Casefinding

At the spring Virginia Cancer Registry conference, Carol Hahn Johnson, BS, CTR, gave an in-depth review of the necessary casefinding methods every registrar should follow. Below is a summary of her presentation; contact the registry if you would like a copy.

What is casefinding? It is a system for locating every patient, inpatient and outpatient, who is diagnosed and/or treated with a reportable diagnosis at your facility. The registrar should keep a monthly tracking system so that the status of the casefinding can be ascertained at any time. The sources for your casefinding are: pathology, cytology, and autopsy reports, disease indices, in/outpatient surgery logs, oncology clinic logs, and radiation therapy new patient logs.

A brief but usable reportable list needs to be in place in the procedure manual and used daily. This reportable list should include cases in the ICD-O-2 with behavior codes of 2 and 3 and include any additional cases required by the central registry. Comparing your caseload from each source on a monthly basis will enable the registrar to find and correct problem areas in the casefinding procedures early and to make corrections.

The Medical Records Diagnosis Index codes that should be reviewed by the registrar in casefinding are:

042.2	AIDS with specific malignant neoplasms
140.0 – 208.9	Malignant Neoplasms
230.0 – 234.9	Carcinoma in situ
238.5 – 238.9	Neoplasms of uncertain behavior
239.0 – 239.9	Neoplasms of unspecified behavior
273.2 – 273.3	Gamma heavy chain disease; Waldenstrom's macroglobulinemia
279.9	Unspecified disorder of immune mechanism
289.9	Acute myelofibrosis
V07.3	Other prophylactic chemotherapy
V07.8	Other specified prophylactic measures
V10.0 – V10.9	Personal history of malignancy (review these for recurrences and subsequent treatment)
V58.0 - V58.1	Admission for radiotherapy/ admission for chemo
V66.1 – V66.2	Convalescence following radiotherapy/ chemo
V67.1 – V67.2	Radiation/chemo follow-up
V71.1	Observation for suspected malignant neoplasms
V76.0 – V76.9	Special screening for malignant neo plasms

Data Quality

The effect of data quality on use at the VCR is immeasurable. In order for VCR data to fulfill their value to clinical researchers, hospital registries, physicians, public health officials, researchers, and the citizens of Virginia, they must consistently meet high quality standards. Registry staff presented these issues to conference participants, provided feedback on the quality of several integral cancer fields, and suggested ways to improve the completeness and accuracy of case data.

Summary guidelines will be compiled and distributed as Handbook inserts. In the meantime, remember:

(1) If no nodes were examined:

DON'T code "00/00" for Nodes examined, Nodes positive
INSTEAD: "00/98" No regional lymph nodes removed,
No Nodes examined

(2) Tumor size

- no decimal places - record in whole (mm)
- record size of the tumor, not the specimen!
- Melanoma—record the Breslow's depth of invasion (thickness) instead of size
  - use SEER guidelines for Breslow's depth
  - do not round to whole mm
  - has two implied decimal places
  - PCE cases can be handled differently; more information to follow

Code	Cancer	Interpretation
038	melanoma	0.38 mm **depth of invasion** (microscopic)
038	any other	38 mm **tumor size** (3.8 cm = golf ball size tumor)

(3) FIPS coding

- Affects cluster studies, certificates of need, and resource allocation
- Should be based on street address, not just city and/ or ZIP code
- http://www.usps.gov/ncsc/ - ZIP+4 Code Lookup if unsure
- Appendices K and L of the *VCR Reporting Handbook, Vol. I* have FIPS codes

ACoS Physician Reporting Panel: Update

The panel discussion presented several ideas for implementation of the impending ACoS standard to accession outpatient cases, including those seen and treated in staff physician offices.

The American College of Surgeons - Commission on Cancer is still pursuing this standard for approved programs but will take a less aggressive approach. The Committee on Approvals met April 29th, just after our meeting, and agreed to NOT have the standard mandatory for 2000. A new Workgroup on Outpatient Accessions, which includes representation from NAACCR (the certification organization for central cancer registries) and hospital-based registries, will evaluate issues and concerns raised in states across the country. Recommendations will be made in 2000 for 2001 implementation and will probably include a modification of the requirements.

Carol Nance, Esquire, is the Assistant Attorney General who advises the Virginia Department of Health on legal issues. As a member of the conference panel on this topic, she informed the registrars that under current Virginia law, physicians cannot report identifying patient information to a hospital without individual patient consent. Ms. Nance's suggestion for how this ACoS standard might work in Virginia involves amending the Code of Virginia to allow physicians to enter into an agreement with a hospital to report his or her cases to the VCR. We are continuing to discuss this matter with Assistant Attorney General Nance and with the Joint Commission on Health Care. The earliest such an amendment would become effective would be July 2000.

Additionally, Dr. George Parker advised the VCR and hospital registrars that most physicians do not understand either the state or ACoS reporting concerns and also do not understand what cancer registrars do. He stated that physicians need cancer registrars' help to understand the importance of and procedures for cancer reporting, both to the VCR and to ACoS.

Theresa Taylor, BSN, of MCV, Bobbie Bayne, CTR, of Lewis-Gale Medical Center, and Carlene Bennett, RN, CTR, of Retreat Hospital also shared insights and suggestions for facilities wishing to implement this standard. Below is a summary of suggestions from the panel:

- Consult your hospital's legal counsel.
- Approach physicians with the greatest stake – dermatologists and urologists – first.
- Understand which satellite and outpatient facilities in your area are truly under your hospital's service umbrella.
- Coordinate with other corporation facilities in your area to share resources.
- Be familiar with both state requirements and ACoS recommendations concerning physician reporting.
- Obtain copies of the new VCR flyer on physician reporting to share as needed with staff physicians.

Site Studies

The 1999 site studies were released at the annual VCR training conference. Cancer of the larynx and melanoma of the skin were the sites of interest this year. Both reports examine the incidence patterns in Virginia and relate trends in detection, treatment and survival to nationwide patterns. These studies also include background information on etiology, risk factors, and clinical features of the disease, as well as methods of prevention, diagnosis, and treatment. Sarah Norris compiled these excellent studies, and we would like to thank Laurence DiNardo, M.D., and Craig Slingluff, M.D., of the VCR Medical Advisory Committee for their work on the studies as well.

HIGHLIGHTS OF THE CUTANEOUS MELANOMA STUDY:

- Cutaneous melanoma is under-reported in Virginia. From 1990 to 1995, age-adjusted incidence rates have been consistently lower than the SEER rate, even though Virginians are not known to be at lower risk for melanoma.
- Although 90% of Virginia melanoma cases were diagnosed in the early stages, Virginia still lags behind the SEER average. Promisingly, the percentage of early stage melanoma has been increasing each year in the state.
- Five-year relative survival rates were lower for Virginia melanoma cases than for SEER.

HIGHLIGHTS OF THE LARYNGEAL CANCER STUDY:

- Overall incidence of laryngeal cancer in Virginia was higher than the national average. Although U.S. laryngeal cancer rates have declined in recent years, Virginia rates have remained constant.
- Although most of the laryngeal cancer in Virginia was diagnosed in the early stages, the state still has a higher percentage of late stage laryngeal cancer than either SEER or NCDB.
- As was found in the melanoma study, five-year relative survival rates for laryngeal cancer across all stages were lower than the national averages.

In addition to distributing copies of Melanoma in Virginia, 1970-1996 and Laryngeal Cancer in Virginia, 1970-1996 at the Spring conference, we have sent the reports to facilities not attending the meeting, hospital administrators, cancer committee chairpersons, ACoS Liaison physicians, and Chiefs of Staff for the Veterans Administration facilities. If you know of physicians or specialty practices that may like a copy of one or both reports, please contact the VCR at (804) 786-1668.

Reporter's Corner

Submission Report Forms

The Submission Report form, color coded for each month, has been in use for over four months. Please remember this form should be sent to the VCR each month. If you do not have data ready to send to VCR for the month, complete the form indicating that fact. If your vendor is sending the data for your facility, complete the form when your data are forwarded to your vendor and send the completed form to the VCR. A BIG THANK YOU to the facilities that have been sending this form in each month.

Timeliness

Cancer cases are reportable to the VCR within six months from the date of diagnosis. All 1997 cases should have been received by July 1998; unfortunately, we still have approximately 2,600 outstanding cases for 1997 from 10 different facilities. If you are one of the facilities that have not forwarded all of your 1997 cases, PLEASE forward them. A BIG THANK YOU to the facilities that have forwarded all of your 1997 cases to the VCR.

VCR has received approximately 40% of the expected cases for 1998. A BIG THANK YOU to the facilities that have forwarded your completed 1998 cases. Remember, all of the cases diagnosed in 1998 should be forwared to the VCR by the end of July 1999. If you have not forwarded your completed 1998 cases, please do so as soon as possible. If you are behind in reporting your 1997 or 1998 cases, please contact the VCR to discuss how we may help you.

VCR Reporting Handbook, Volume I, Nears Completion

Registry staff is compiling the final Volume I resources for distribution later this summer. These will include modified staging diagrams, data field list, and data quality guidance. Separate volumes for non-registry hospitals and for physicians and labs are underway.

Congratulations!!

Cancer registries in Virginia now have three new Certified Tumor Registrars! The following registrars passed the CTR exam held March 12, 1999:

Lottie Barry, CTR – Rockingham Memorial Hospital
Sheryl Goins, CTR – Potomac Hospital
Bonnie Perry, ART, CTR – Virginia Cancer Registry

Benign CNS and Brain Tumors

Virginia is one of 12 states contributing to the Central Brain Tumor Registry of the United States (CBTRUS), a not-for-profit corporation committed to providing a resource for gathering and disseminating current epidemiologic data on all primary brain and central nervous system (CNS) tumors (malignant and benign) to accurately describe their incidence and survival patterns, evaluate diagnosis and treatment, facilitate etiologic studies, establish awareness of the disease, and ultimately, for the prevention of brain tumors. More information can be obtained at **www.cbtrus.org.**

It is important to collect information on both malignant and benign tumors of the brain/CNS because they often have similar prognoses, can be difficult to differentiate, and may share similar etilogies. Since 1994 these cases HAVE BEEN REPORTABLE to the VCR under Section 5-90-160 of Regulations for Disease Reporting and Control and need to be abstracted, staged, and followed. An average of 166 benign and 378 malignant brain/CNS tumors have been reported to the VCR each year from 1994 to 1996. The majority of benign tumors are reported for the brain (47%); 37% were of the meninges; 8% were spinal cord, cranial nerves, and other CNS; and 7% were pituitary, craniopharyngeal, or pineal in origin. Alternatively, 18% of all brain tumors reported were benign; 93% of meningial tumors; 41% of spinal cord, cranial nerves, and other CNS tumors; and 75% of pituitary, craniopharyngeal, or pineal tumors.

Please remember this does not apply solely to brain tumors. The table below lists the reportable CBTRUS brain and central nervous system tumor histology groupings and the ICD-O topography codes (also the ICD-9-CM).

A listing of histology codes are on the following page.

HISTOLOGY	ICD-O HISTOLOGY CODE
Tumors of Neuroepithelial Tissue	
Diffuse astrocytoma (protoplasmic, fibrillary)	9410, 9420
Anaplastic astrocytoma	9401, 9411
Glioblastoma	9440, 9441, 9442
Pilocytic astrocytoma	9421
Unique astrocytoma variants	9383, 9384, 9424
Oligodendroglioma	9450
Anaplastic oligodendroglioma	9451, 9460
Ependymoma/anaplastic ependymoma	9391, 9392, 9393
Ependymoma variants	9394
Mixed glioma	9382
Astrocytoma, NOS	9400
Glioma malignant, NOS	9380
Choroid plexus	9390
Neuroepithelial	9381, 9423, 9430
Benign and malignant neuronal/glial, neuronal and mixed	8680, 9364, 9490, 9491, 9500, 9505, 9506
Pineal parenchymal	9360, 9361, 9362
Embryonal/primitive/medulloblastoma	8963, 9443, 9470, 9471, 9472, 9473, 9502, 9503
Tumors of Cranial and Spinal Nerves	
Nerve sheath, benign and malignant	9540, 9550, 9560, 9570
Other tumors of cranial and spinal nerves	9562
Tumors of the Meninges	
Meningioma	9530, 9531, 9532, 9533, 9534, 9537, 9538
Other mesenchymal, benign and malignant	8800, 8801, 8803, 8810, 8830, 8850, 8861, 8900, 8910, 8990, 9133, 9150, 9231, 9240, 9480, 9481, 9536
Hemangioblastoma	9161, 9535
Lymphomas and Hemopoietic Neoplasms	
Lymphoma	9590, 9591, 9594, 9595, 9630, 9640, 9650, 9663, 9670, 9671, 9672, 9675, 9680, 9681, 9682, 9683, 9684, 9685, 9686, 9687, 9690, 9691, 9693, 9695, 9696, 9698, 9702, 9707, 9711, 9714, 9720, 9723, 9731, 9766, 9827, 9830, 9970
Germ Cell Tumors and Cysts	
Germ cell tumors, cysts, and heterotopias	8020, 9060, 9061, 9064, 9071, 9080, 9081, 9084, 9085
Tumors of the Sellar Region	
Pituitary	8040, 8140, 8146, 8260, 8270, 8271, 8280, 8281, 8290, 8300, 8323, 8333
Craniopharyngioma	9350
Local Extension From Regional Tumors	
Chordoma/chondrosarcoma	9370
Unclassified Tumors	
Hemangioma	9120, 9121, 9130, 9131
Neoplasm, unspecified	8000, 8001, 8002, 8003, 8010
All other	8720, 9580

TOPOGRAPHY CODES

Site	ICD-0	ICD—CM
Cerebrum	C71.0	191.0
Frontal Lobe	C71.1	191.1
Temporal Lobe	C71.2	191.2
Parietal Lobe	C71.3	191.3
Occipital Lobe	C71.4	191.4
Ventricle, NOS	C71.5	191.5
Cerebellum, NOS	C71.6	191.6
Brain Stem	C71.7	191.7
Other Parts of Brain/Overlapping	C71.8	191.8
Brain, NOS	C71.9	191.9
Cranial Nerve	C72.2, C72.3, C72.4, C72.5	192.0
Cerebral Meninges	C70.0, C70.9	192.1
Spinal Cord	C72.0, C72.1	192.2
Spinal Meninges	C70.1	192.3
Overlapping	C72.8	192.8
Nervous System, NOS	C72.9	192.9
Pituitary	C75.1, C75.2	194.3
Pineal	C75.3	194.4

VCR Study Completed

The Joint Commission on Health Care recently completed its study of the Virginia Cancer Registry. Six policy options were presented at the June 29th meeting. Following the public comment period, options and comments will be considered as analysts prepare policy recommendations for the 2000 General Assembly session. The following policy options were presented:

(1) Take no action.

(2) Introduce legislation, and an accompanying budget amendment, requiring the Virginia Cancer Registry to implement a mechanism – based on the use of dedicated field staff – for ensuring that all cancer cases are accurately reported.

(3) Introduce legislation requiring the Virginia Cancer Registry to annually perform a death clearance and follow-back process.

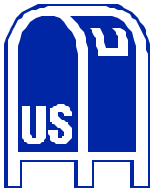
(4) Introduce a joint resolution requesting the Virginia Cancer Registry to take all actions necessary to ensure that follow-up data on cancer patients is collected from hospitals, processed in a timely manner, and used to support cancer patient survival analysis. The joint resolution should require the Virginia Cancer Registry to report to the Governor and the General Assembly concerning its progress prior to the 2002 General Assembly Session.

(5) Introduce a budget amendment (language) directing the Department of Personnel and Training, with technical assistance from the Virginia Department of Health, to conduct a compensation and position classification study of the Virginia Cancer Registry, with a focus on the Medical Record Technician, Senior, positions.

(6) Introduce legislation, and an accompanying budget amendment, requiring the Virginia Cancer Registry, in cooperation with medical providers, to develop and implement a mechanism for notifying all cancer patients in Virginia of the purpose, objectives, and requirements of the Virginia Cancer Registry and the confidentiality policies and procedures that have been implemented, as part of the reporting process.

Getting the Word Out

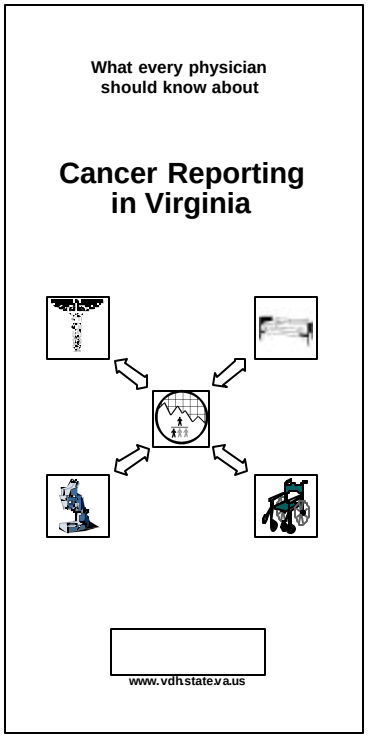
Dr. Robert Faulconer of the VCR Medical Advisory Committee spoke on the Registry's behalf at the May 1st business meeting of the Virginia Society for Pathology. Before a crowd of 100 fellow pathologists and technical staff, Dr. Faulconer discussed the need to ensure that cancer cases are reported to the central registry. His words will travel far past the large audience present, as members agreed to return to their practice or facility and spread the word to their medical communities. We hope this collegial message will reach physician office-based pathology labs as well as the independent pathology labs across the state.



Physician Mailing Goes Out

Almost 20,000 copies of the revised Regulations for Disease Reporting and Control have been distributed to each physician and laboratory licensed in Virginia, as well as hospital microbiology labs, infection control staff, and administration. As you may recall, changes to the cancer reporting regulations became effective January, 1999, and echo the Code of Virginia physician reporting mandate that went into effect July 1, 1998 (see Appendices D and E in your VCR Reporting Handbook).

The mailing packet included "What Every Physician Should Know about Cancer Reporting in Virginia," a targeted flyer to highlight new reporting responsibilities for Virginia physicians. The flyer identifies reportable tumors and cancers, describes why physician-office cases need to be included in the statewide surveillance system, and provides a decision flow-chart for when physicians must report cancer to the VCR. Please call the VCR if you would like some copies of the flyer to have on hand at your registry.



Mark Your Calendar

August 1 — **Application Deadline for September CTR Exam**

August 16 - 20 & November 8 - 12 — **Principles and Practice of Cancer Registration, Surveillance and Control,** Atlanta, GA; registration fee $800.00. This program will be held on the campus of Emory University. This program is suitable for all oncology healthcare personnel, especially oncology program (hospital-based and central registry-based) employees with minimal knowledge of cancer anatomy, physiology and medical terminology. Cancer registrars, statistical staff and epidemiological staff who utilize cancer registry data would benefit most from this program. Complete details are available via their web site at http:/cancer.sph.emory.edu or contact Steven Roffers, PA, CTR at (404) 727-4535.

August 23-24 — **Pediatric Cancer Registry Training Program,** Atlanta, GA; registration fee $200.00: This program is suitable for oncology program (hospital-based and central registry-based) employees with minimal knowledge of cancer, anatomy, physiology, and medical terminology. Cancer registrars with less than one year of experience or statistical and epidemiological staff who utilize cancer registry data would benefit most from this program. This training program will focus on pediatric cancer histologies and sites. For more information contact Steven Roffers, PA, CTR at (404) 727-4535, fax (404) 727-7261 or email at sroffer@sph.emory.edu.

September 13-17 — **Cancer Data Collection Basic Registry Workshop**, Chicago, IL; registration fee $375.00: Attendance is limited to 35; for more information contact Elaine Fulton at (312) 202-5401, fax (312) 202-5009 or email at efulton@facs.org.

September 18 — **CTR Exam**

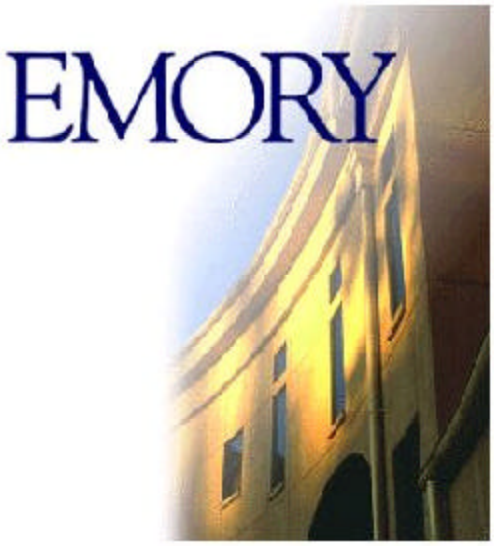
Year 2000

January 10 - 12 & June 19 - 21 — **Advanced Cancer Registry Training Program**, Atlanta, GA; registration fee $400.00: This intensive and comprehensive training program is taught by a staff of recognized experts in cancer registration, surveillance, and control. This Advanced Cancer Registry Training Program will specifically address: abstracting, staging, and coding really difficult cancer cases; bizarre, rare, and unusual cancer cases; calculating incidence, prevalence, age-adjusted, survival, and other rates; using registry data (preparation, analysis, annual reports, etc.); and using the Internet to locate comparable data and useful cancer information and resources. Participants must have attended the Principles and Practice training program prior to registering for this advanced training (or have at least one year of experience working in a cancer registry). For more information contact Steven Roffers, PA, CTR at (404) 727-4535, fax (404) 727-7261 or e-mail sroffer@sph.emory.edu.

March 6 - 10, August 14 - 18 & November 6 - 10 — **Principles and Practice of Cancer Registration, Surveillance and Control,** See above for more information.

March 13 - 14 — **Pediatric Cancer Registry Training Program,** See above for more information.

Registry Development



Leona Rowe, CTR, attended the "Advanced Cancer Registry Training" program at Emory University, Atlanta, Georgia, Rollins School of Public Health, June 14-16, 1999. This training program was sponsored by The National Cancer Institute's Metropolitan Atlanta SEER Cancer Registry in conjunction with the Rollins School of Public Health and the Winship Cancer Center at Emory University.

This three-day intensive training was aimed at abstracting, coding bizarre and unusual cancer cases, casefinding audit reviews, confidentiality, the registrar's use of the Internet, and quality control methodologies. Another segment of the training included basic epidemiology, collecting quality data, and how to analyze and present data. The course included 24 hours of classroom instruction and was led by experts in cancer registration and surveillance: Steven Roffers, PA, CTR, Clinical Instructor, and John Young, Jr., DrPH, CTR, Professor of Epidemiology, Emory University, Rollins School of Public Health.

Hospital registrars should consider this a training opportunity. Participants included over 30 people from both hospital and central cancer registries across the U.S., as well as Nova Scotia, Canada and Guam. The National Cancer Registrars Association awards 15 CEUs for full attendance and completion of post test. The next offering of this course will be January 10 - 12, 2000.

'Wish You Were There!'

For nine of Virginia's cancer registrars, the flights to and from Dallas, Texas in late May probably would have been voted high on life's "top ten" unpleasant experiences. The 25th Anniversary NCRA Conference (May 25-28, 1999) that they attended there, however, made the trip well worth the agony. And the travelers from the VCR (Bonita Bryant, Melinda Swingle, and Bonnie Perry) wish that all of you could have been there!

The theme of the conference was "Education and Celebration"—and it was a theme well carried out. On the educational side, the meeting schedule was full—with four challenging pre-conference workshops beginning early on Tuesday. Wednesday's schedule of meetings ranged from small special interest group "break-out" sessions to informative and inspiring plenary sessions featuring such speakers as Daniel Miller (CDC), who spoke on the "Evolution of the Cancer Registrar: Survival of the Fittest." On Thursday, the meetings followed a track format; it was a day of concurrent sessions covering a wide range of topics for registrars with many different backgrounds and concerns. On the final day, the conference resumed plenary sessions that included oral abstract presentations; a report on the status of ICD-O-3; and a 25-year history of the cancer registry, the Commission on Cancer, and NCRA. When it came to celebrating, there was plenty. Since this was the NCRA's silver anniversary, the mood from the opening welcome by outgoing NCRA president, Steven Roffers, to the delicious anniversary banquet followed by late night dancing to a live band, to Rosemarie Clive's reminiscent "stroll" through our profession's last 25 years—was all about celebration!

For those Virginia registrars who could not get to this year's meeting, it's not too soon to start planning ("scheming"?) and arranging to attend next year's NCRA Conference. It will be held in Albuquerque, New Mexico; or maybe you'll get to the one in the year after that, 2001, at the Walt Disney World Village in Orlando, Florida! In either case, wouldn't it be great if we all showed up?!

National Cancer Registrars Association

Statistical Overview of Bladder Cancer

Bladder is the sixth most common cancer in the United States and the seventh most commonly diagnosed cancer in Virginia in 1996. Three main types of bladder tumors can develop: transitional cell carcinoma, which nationally accounts for about 90% of bladder tumors (91.3% in Virginia in 1996); squamous cell carcinomas, which account for about 8% of bladder tumors (4.6% in Virginia for 1996); and adenocarcinomas, which account for only 1%-2% of bladder tumors (1.2% in Virginia in 1996). There are other types of bladder cancers; however, these are rare.

Smoking is by far the greatest risk factor in bladder cancer. Smoking causes about half of the deaths from bladder cancer in men and over one third of bladder cancer deaths in women. Individuals who smoke are more than twice as likely to get bladder cancer than those who do not smoke. Other risk factors include certain chemicals that have been linked with bladder cancer. Chemicals called aromaticamines, such as benzidine and beta-naphthylamine, that are sometimes used in the dye industry can cause bladder cancer. Other industries that use certain organic chemicals also put workers at risk for bladder cancer if exposure is not limited by good workplace safety practices. Industries carrying the highest risks include the manufactures of rubber, leather, textiles, and paint products, as well as, printing companies. In addition urinary infections, kidney and bladder stones, and other causes of chronic bladder irritation have been linked with bladder cancer -- especially squamous cell carcinoma of the bladder.

The American Cancer Society estimates that there will be about 54,200 new cases of bladder cancer in the U.S. in 1999. This breaks down to 39,100 new cases for men and 15,100 new cases for women. In 1999, there will be about 12,100 deaths from bladder cancer in the U.S. (about 8,100 men and 4,000 women).

Early diagnosis improves survival. The chart below gives U. S. survival rates for bladder cancer.

Stage at Diagnosis	Five Year Survival
Local	95%
Regional	50%
Distant	6%

In Virginia, it is estimated that there will be 1,100 new bladder cases for 1999. In 1996, there were 978 new bladder cases reported (705 men and 273 women). For these 1996 cases, 86.7% were white, 10.3% were black, 0.2% were Asian, 0.6% were another race, and 2.1% were unknown race. Over 500 deaths were reported from malignancies in urinary organs in 1996 for Virginia.

Age-adjusted incidence rates for bladder cancers for Virginia from 1990-1996 are given in the table below. It provides age-adjusted incidence rates by sex for these years.

*Rates are per 100, 000 and are adjusted to the 1970 U.S. standard population. These data include all reportable tumors with stage of disease of in situ or invasive.

Sources: American Cancer Society 1999 Facts and Figures; **www.cancer.org**
Virginia Cancer Registry
Center for Health Statistics, Virginia Health Statistics 1996