

Association of Radiation Oncologists of India



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ICRO-OUR MISSION

Indian college of radiation oncology is an integral part of the association of radiation oncologists of India. The aim of ICRO is to coordinate & promote the academic as well as research activities in radiation oncology. The basic objective is to improve the overall standard of post-graduate teaching, exchange of scientific programs among the members of different parts of the country, to coordinate & promote the clinical research.

The success of any association depends on its member strength. To become a life member of ICRO, the following are the requirements i.e

Those members of AROI, who possesses a recognized

1. Post graduate qualification with more than 10 yrs experience

2. At least 5 research publications in books/ journals

3. Affiliation to teaching institutions imparting post graduate training in radiation oncology. Research institutions conducting research are eligible to be life member of ICRO.

Till now ----- no of members have enrolled themselves as founder members + life members of ICRO.

ICRO organizes the scientific meetings in the form of CMEs, updates, refresher courses, work shops, symposia, public lectures, guest lectures, etc at periodic intervals at different parts of the country in collaboration with the state/ zonal chapter of AROI. In every annual conference the 1st day of conference is solely dedicated for one day CME, organized by Indian college of radiation oncology.

On 7th august 2006, an ICRO-AROI meeting was held at TMH, Mumbai with Prof G.K.Rath (President AROI), Dr.R.Vasistha (Secy Gen AROI), Dr.K.A.Dinshaw (past president AROI), Prof S.C.Sharma (Past President

AROI), to set up a post graduate teaching course for post graduate students to update their knowledge regarding present day concept of radiation oncology (specially for postgraduates or students where facilities are not available).

The following decisions were taken,

1. The study course will be for 2 days only,

2. ICRO-AROI will be the nodal agencies & will conduct the teaching courses.

3. The venue will be decided by the core committee of ICRO, preferably in a teaching institution & institutions having good infrastructure.

4. The students from institutions having less infrastructure or teaching facilities will be given priority during the selection process.

5. A letter will be sent to all the HOD's to nominate maximum 2 students of 2nd & 3rd yr. MD/DNB preferably from MCI accredited institutions.

6. The selection of the candidate will be done by the committee formed by the Chairman & Secretary of ICRO in consultation with the President & Secretary of AROI.

7. The student delegate will be provided 2nd A/C railway fare & the faculty will be provided air fare or 2nd A/C fare. Accommodation will also be provided by the organizing committee.

8. The chairman & Secretaries of ICRO in consultation with local organizing committee will draft the final programme & decide the lectures.

9. The no. of participants will be 30 to 40.

With this mission ICRO-AROI has successfully completed 8 scientific CME programs till today. The details of which has been given below,

Member Of Editorial Board

Dr. Sandhya Sood	Dr. Ramesh Billimaga	Dr. Sushmita Ghoshal
Mr. Bikramjit Singh	Dr. A.K. Asthana	Dr. K.K. Singh
Dr. D.P. Aggarwal	Dr. Shantanu Choudhary	Dr. Pankaj Choudhary



Prof P.K. Julka
Chairman, ICRO



Dr S.N. Senapati
Secretary, ICRO

ICRO PG TEACHING PROGRAMME

DETAILS OF ALL PROGRAMMES WITH NAMES OF WINNERS

SNO	ICRO PROG	TOPIC	CONDUCTED AT	DATE	NAMES OF WINNER PGs	Nos of PGs Participated
1.	1ST ICRO PG TEACHING PROG	Brain Tumour	TMH,Mumbai	Sep-06	Dr C.Srinivas,TMH, Mumbai Dr Shikha Goel,AIIMS, New Delhi	49
2.	2ND ICRO PG TEACHING PROG	Head & Neck Cancer	IPGMER,Kolkata	May-07	Dr Santam Charaborty,PGI,Chandigarh Dr S.Arun Kumar, PGI,Chandigarh	56
3.	3RD ICRO PG TEACHING PROG	CA Cervix	PGIMER,Chandigarh	Oct-07	Dr Sayan Kundu,CMC, Kolkata Dr Ajay Thomas, Med.College,Trivandrum	67
4.	4TH ICRO PG TEACHING PROG	Prostate Cancer	M.S.Ramaiyah Medical College,Bangalore	May-08	Dr Apama Bandopadhyay,CMC,Kolkata Dr Kavsarmahiya Quazi, Jaslok,Mumbai	38
5.	5TH ICRO PG TEACHING PROG	Breast Cancer	GCRI,Ahmedabad	Oct-08	Dr Gunjal Baijal,KMC, Manipal Dr Vijay Patil,PGI,Chandigarh	42
6.	6TH ICRO PG TEACHING PROG	Target Volume Delineation	SGPGIMS,Lucknow	May-09	Dr Subhash Pandit,AIIMS,New Delhi Dr Manish Chomal, Batra Hospt, New Delhi	45
7.	7TH ICRO PG TEACHING PROG	Lung & Esophageal Cancers	AIIMS,New Delhi	Sep-09	Dr Swati Trivedi, TMH,Mumbai Dr Sujith M.,AIIMS, New Delhi	53
8.	8TH ICRO PG TEACHING PROG	Paediatric Oncolog & Hematological Malignancies	CMC,Vellore	May-10	Dr Shilpi Roy,KMC, Manipal Dr Nanditha Sesikeran, NIIMS,Hyderabad	45

SCIENTIFIC PROGRAM (THEME): "RECENT ADVANCES IN HEAD AND NECK CANCERS"

Speaker	Title
Dr. Ashwini Budrukkar	Brachytherapy for Head & Neck Cancer
Dr. Tejpal Gupta	Response assessment with FDG-PET/CT in HNSCC
Dr. Suman Malik	Application of Kv Cone Beam CT in IGRT
Dr. Tabassum W	Role of RT in LAHNC and Can addition of Targeted therapy make a difference?
Dr. Pankaj Chaturvedi	Non-Invasive diagnosis of oral cancer and pre cancer
Dr. Avinash Pandey	Assessment of Swallowing Function in Head & Neck Cancer Patients receiving definitive CRT
Dr. R Sarin	IAEA Project on Oncology Centres

On completion of each CME ,there will be an evaluation /examination among the participants.2 successful participants will be selected for the prizes.They will be awarded with a momento ,cash prize of Rs..... in the inaugural function of next annual conference of AROI. Winners will also be provided travel by 2nd A/C train & accomodation.The list of successful participants are mentioned above.

On 29th may 2009,another meeting was held at SGPGI,lucknow with the chairmanship of Prof.F.D.Patel and the members present were Prof.S.K.Srivastava(ex-PresidentAROI),Prof P.K.Julka,Chairman ICRO,Dr.S.N.Senapati,Secretary ICRO,where it was unanimously decided that the

1) 2nd/3rd yr (not after examination) post graduate student, who have not attended the CME earlier is eligible for the ICRO CME teaching courses provided they are the member of AROI.

2) A CME book will be published for ICRO CME Programme going to be held on day 1 of the annual conference & to be circulated to the registered participants in AROI annual meeting.

3)Participants of CME programme has to present their experience in their department & a copy of presentation should be send to the Secretary, ICRO.

4) The presentations of all the CME will be posted in AROI WEBSITE which is in final stage of preparation.

The response of the postgraduates in different CME is overwhelming.

The feedback that has been obtained from the the students that they are more interested to update their knowledge in Brachytherapy, Radiation physics and Radiation Biology. On this issue we are planning to include these topics in the forth coming CME programs.

We sincerely request the fellow members to

- Enroll themselves as life members (those who are eligible) of ICRO.
 - The membership form is available in our association website www.AROI.org
 - Duly filled up membership form should be send to Secy Gen AROI, Dr.R. Vasistha with a draft of Rs 2550 n favour of AROI.
 - The e-mail ID of Dr.VASISTHA is drvasistha@gmail.com
- All the post graduate student should be encouraged to be the member of AROI, so that they can avail the CME teaching programme.
- The CME presentation is in final shape & is going to be posted in our website shortly.
- If any institution/members not getting information about the CME, they are requested to send the information to the President / Secretary General AROI/chairman/secretary AROI
- The participants of the CME programme are requested to present their experience in their department & send a presentation to the secretary, ICRO. But unfortunately no feedback has been received till today.

We sincerely request all the members to give us feedback, suggestions & healthy criticism, for the future development of ICRO.

Prof P.K.Julka
Chairman,ICRO

Dr S.N Senapati
Secretary,ICRO

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Report on Maharashtra Chapter of AROI

By Dr. Virendra J. Vyas, Prof. & Head, Dept. of Radiation Oncology, MGIMS, Sevagram

A Meeting of Maharashtra Chapter of AROI was held at Lecture hall, Rustom Choksi, Auditorium, 2nd Floor GJ Block, Tata Memorial Hospital, Parel, Mumbai on 25th June 2010. The theme of meeting was "Recent Advances in Head and Neck Cancers".

Total 49 delegates participated in the meeting the prominent persons were Dr. K. A. Dinshaw Ex. Director Tata Memorial Centre, Dr. S. K. Shrivastava Head Dept. of Radiation Oncology Tata Memorial Hospital, Dr. Nagraj Chief Editor of our journal, Dr. V. Kanna, Head Dept. of Radiation Oncology, P. D. Hinduja Hospital Mumbai, Dr. Rajeev Sarin, Director ACTREC T.M.H. and President of state chapter and Dr. Virendra J. Vyas, Secretary of the Chapter and Prof. and Head, Dept. of Radiation Oncology, MGIMS, Sevagram Wardha. Dr. J. P. Agrawal was scientific coordinator and Dr. Umesh Mahant Shanti was organizer of event.

CIRCULAR

Following is the detail of applications received for different AROI Fellowships & Best Paper Categories received. If name of any applicant is missing from the respective list, he / she may approach Secretary General with a proof that the application was submitted ontime. Also please note that candidates who fulfill the respective criteria will be informed after scrutinizing all the applications.

Application Received for different AROI Fellowships

Age Group more than 50 Years

- 1.Dr. Kishore Singh
- 2.Dr. Manoj Sharma
- 3.Dr. R.K. Vyas
- 4.Dr. Arvind Verma

Age Group more than 40 Years

- 1.Dr. A.K. Pandey
- 2.Dr. Parveen Kaur
- 3.Dr. Rajiv Ranjan Prasad
- 4.Dr. Kailash Kumar Singh
- 5.Dr. Sandeep Jain
- 6.Dr. Keshav Talparta

Age Group 35-40 Years

- 1.Dr. Vinod K Nimbran
- 2.Dr. Sharad Singh
- 3.Dr. Debnaryan Dutta
- 4.Dr. Pritanjali Singh
- 5.Dr. Gautam K Sharan
- 6.Dr. Piyush Kulshrestha
- 7.Dr. Haresh KP
- 8.Dr. Sridhar.PS.

Age Group less than 35 Years

- 1.Dr. Robin Khosa
- 2.Dr. Kuldeep Sharma
- 3.Dr. Kahnu Charan Patro
- 4.Dr. Dodul Mondal
- 5.Dr. Pooja Nandwani Patel
6. Dr. Suman Malik
- 7.Dr. Mranalini Verma.
- 8.Dr. Rambha Pandey
- 9.Dr. Shikha Goyal

BEST-AROI Fellowship

- 1.Dr. R.R. Negi
- 2.Dr. C Saravankumar
- 3.Mr. Shiv Parkash
4. Manish B Sharma

- BEST-AROI Oncologist
BEST-AROI Med. Physicist
BEST-AROI Radiotherapy Technologist
BEST-AROI Radiotherapy Technologist

Neal Joseph Fellowship

- | | | | |
|--------------------|-----------------------|-----------------------------|--------------------------|
| 1.Dr. Sharad Singh | 3.Dr. Shraddha Raj | 6.Dr. Priyanka Singh | 9.Dr. Deepak Shankar Ray |
| 2.Dr. Ajay Khosley | 4.Dr. Satyender Sinha | 7.Dr. Anjan Adak | 10.Dr. Monalika |
| | 5.Dr. Chaitiparna Das | 8.Dr. Sarthak kumar mohanty | 11.Dr. Abhishek |

Application Received for different BEST-Papers

Best paper Dr.G.C.Pant Young Doctors Award	Best paper Parvati Devi & J.M. Pinto Gold Medal	Best paper for Medical Physicist
<ol style="list-style-type: none">1.Dr. Kuldeep Sharma2.Dr. Thomas R. Ram3.Dr. Maheshkumar N Upasani4.Dr. Rakesh Kr Gupta5.Dr. Mranalini Verma.6.Dr. Rambha Pandey7.Dr. Raja Paramjeet Singh8.Dr. Divya Khosla9.Dr. Kaushal Narang10.Dr. Pritanjali Singh11.Dr. Robin Khosa	<ol style="list-style-type: none">1.Dr. Sumitava De2.Dr. Anjan Adak3.Dr. Shraddha Raj4.Dr. Deban Banerjee5. Major M.Q. Baig6.Dr. Abhishek Gulia7.Dr. Philip George8.Dr. Ashuman Bansal9.Dr. Sujith Kumar M10.Dr. Archana Singh11.Dr. Chaitiparna Das12.Dr. Sarthak Kumar Mohanti	<ol style="list-style-type: none">1.Dr. Saikat Das2.Dr. R. Balasubramaniam3.Dr. P.K. Sharma4.Dr. Senthilkumar
		Please update ur email address to DR. RAJESH VASHISTHA Secretary General Aroi email: drvashistha@gmail.com vashistha.ROI@gmail.com

Cancer Prevention Diet

Dr. Vivek Kaushal Dr. Mittal K, Department of Radiotherapy, Regional Cancer Center, Post Graduate Institute of Medical Sciences, Rohtak, Haryana

"The wise man should consider that health is the greatest of human blessings. Let food be your medicine."

-Hippocrates

Introduction

A revolutionary in nutrition therapy, the biochemist Paul Stitt, believed that *"The cure for cancer will not be found under the microscope, it's on the dinner-plate"*. Dietary patterns, foods, nutrients, and other dietary constituents are closely associated with the risk for several types of cancer. And while it is not yet possible to provide quantitative estimates of the overall risks, it has been estimated that 35 percent of cancer deaths may be related to dietary factors. Almost all cancers (80-90%) are caused due to environmental factors and of these, 30-40% of cancers are directly linked to the diet.¹

Active Ingredients and their mechanism of action

A large number of epidemiologic, animal, and laboratory studies indicate that abundant consumption of food of plant origin reduces the risk of several types of cancer. When results of studies on all types of cancer are taken together, as many as 80% show a substantial decrease in risk with higher intake of at least 1 vegetable or fruit category examined. This is particularly true for cancers of the upper gastrointestinal tract; for example, studies indicate that as many as 75% of colorectal cancers, could be prevented by increasing the amount of plant-based food in the diet. The chemopreventive effect is related to the high content in these foods of phytochemicals with potent anticancer and anti-inflammatory properties. These properties block precancerous cells from developing into malignant cells by interfering directly with tumor cells and by preventing generation of an inflammatory microenvironment that would sustain the progression of the tumors. In many cases, these anticancer phytochemicals interfere with tumor promotion and progression by antiangiogenic mechanisms.²

Even healthy people have a certain number of latent tumors in their tissues. Studies of people who died from causes unrelated to cancer have shown that 30% to 50% of women aged 40 to 50 years had premalignant microscopic breast tumors, and 40% of similarly aged men had precancerous cells in the prostate. Even more striking, virtually every person (98%) had small latent tumors in the thyroid, although these tumors are only very rarely observed in the clinic. It thus seems that the spontaneous formation of small tumors happens frequently over a lifetime, but that in most cases the growth of these small tumors is tightly controlled by our natural defence mechanisms, and they remain in a microscopic and harmless state. The appearance of clinically detectable cancer thus implies that precancerous cells have overwhelmed these defences and acquired the ability to grow and invade the host tissues. This can be prevented by phytochemicals.³

Nutrients in our food can fight cancer by protecting our bodies' cells from mutations caused mainly by carcinogens and free radicals. Antioxidants have been shown to minimize the damaging effects of free radicals and fight off tumors. Free radicals cause oxidative damage to our DNA and mutate the cells, which then proliferate into a tumor and thus cause cancer. The oxidative damage can be prevented when nutrients bind the free oxygen, therefore prohibiting it from roaming the body and damaging its cells. In addition to antioxidants, vitamins and trace minerals have a powerful effect on free radicals in terms of neutralizing them, as previously described, and preventing damage to the body's cells. For example, isothiocyanates, compounds found in abundance in

cruciferous vegetables, inhibit tumorigenesis by reducing genetic damage induced by a wide variety of chemical carcinogens. Phytochemicals, which modulate the host's defence mechanism against DNA-damaging molecules, are also found in several other types of fruit and vegetables, including members of the genus *Allium* (such as garlic) and citrus fruit. The ability of these molecules to reduce the oncogenic potential of carcinogens thus makes them an efficient first-line defence against cancer.⁴

Several phytochemicals also inhibit tumor growth by directly inducing cancer cell death by apoptosis. For example, phenethyl isothiocyanate from cruciferous vegetables, curcumin from turmeric, and resveratrol from grapes have all been shown to possess strong pro-apoptotic activity against cells isolated from a variety of tumors. Angiogenesis is the process by which tumor cells stimulate formation of new blood vessel networks that sustain the development of cancer by providing oxygen and nutrients to tumor cells. Several phytochemicals possess strong antiangiogenic activity and that this effect likely plays an important role in their chemopreventive properties. For example, epigallocatechin-3-gallate (EGCG), an abundant polyphenol found in green tea, potently inhibits vascular endothelial growth factor receptor-2, a key receptor involved in tumor angiogenesis. It has been shown to be of benefit in prostate cancer and CLL. In a similar manner, ellagic acid, a phenolic acid found in high quantities in some fruit, such as raspberries and strawberries, and delphinidin, an anthocyanidin abundant in blueberries, also block vascular endothelial growth factor receptor-2 activity.⁵

Berries have been causing a lot of commotion and promise in the world of cancer research. The darker the berry, the better in terms of being more packed with nutrients that is better at warding off cancer. Research has been putting the spot light on black raspberries and their ability to reduce oxidative stress and gastroesophageal reflux disease, each of which causes damage to the esophageal cells. Close runner-ups to the black raspberry are blueberries, blackberries, strawberries, and cranberries. These berries are high in vitamin C, fiber, and ellagic acid, which can prevent skin cancer. In addition to these nutrients, the American Association for Cancer Research found that berries are extremely high in polyphenol phytochemicals, and some research is suggesting that these phytochemicals are what is inhibiting tumor growth, more so than vitamins and minerals. These phytochemicals have the ability to interfere with tumor development, probably due to their natural job of protecting plants and their structures, as well as maintaining their vibrant colors. Beta-carotene and lycopene are two prevalent nutrients that have shown a lot of promise in their capabilities to slow tumor growth.²

Flavonoids and catechins are nutrients that give foods a bitter taste, but they also are emerging as great anticancer agents. In fact, catechins are 100 times more powerful than vitamin C and 25 times more powerful than vitamin E in their antioxidant/growth inhibitor powers. The flavonoids and catechins together have proven the ability to protect cells from x-ray damage, block the progression of the cell cycle, and inhibit mutations. Other foods high in flavonoids are garlic, onions, shallots, and leeks, which also contain vitamin C, selenium, and sulfur compounds that together, increase the metabolic disposal of chemical carcinogens, thus lowering the risk of cells turning cancerous.^{2,3}

In 1970s, British physician, Dennis Burkitt, observed that a high-fiber diet reduces risk of colon cancer. Increasing evidence suggests that diets high in foods containing fibre are associated with a reduced risk for cancer, especially cancer of the colon.⁶

A few studies have also shown a reduced risk for cancers of the breast, rectum, oral cavity, pharynx, stomach, and other sites with diets rich in fruits, vegetables and grain products. Numerous studies have found evidence that carotenoids reduce the risk of some cancers. The evidence is particularly strong for lung cancer, even after taking smoking into account. Vitamin C is found in fruits, particularly citrus fruits and juices, and in green vegetables, as well as in some fortified foods. Of a group of epidemiologic studies investigating the role of vitamin C, three-quarters found that vitamin C, or fruit rich in vitamin C, provides significant protection.^{1,3}

A leaner diet is believed to lower cancer risk. Tomatoes, calcium, *agaricus blazei* mushrooms, other minerals, saponins, sausage tree, sea mat, cat's claw, and licorice are believed to prevent or suppress different kinds of cancerous tumors. A highly purified compound isolated from the medicinal mushroom *Trametes versicolor*, known as Polysaccharide-K, has become incorporated into the health care system of a few countries, such as Japan. Japan's Ministry of Health, Labour and Welfare approved the use of Polysaccharide-K in the 1980s, to stimulate the immune systems of patients undergoing chemotherapy.⁷

Alcohol is a risk factor for cancers of the mouth, esophagus, pharynx, and larynx, breast cancer, colorectal cancer, and liver cancer. When combined with smoking, these risks skyrocket. Alcohol is associated with an increased risk; 3.6% of all cancer cases and 3.5% of cancer deaths worldwide are attributable to alcohol drinking. Fast foods also are said to raise cancer risk.^{1,3,4}

Food, Nutrition, Physical Activity and the Prevention of Cancer: a Global Perspective, also known as the Expert Report, was an expert report published by the World Cancer Research Fund global network in 2007. The Report took six years to produce and is thought to be the most comprehensive report of its kind. In the initial sweep, 500,000 studies were found, which were screened down to 22,000. Eventually, 7,000 were deemed relevant and met the rigorous quality criteria for definitive conclusions on cancer prevention to be drawn. It reviewed all the evidence about the links between cancer and diet, physical activity and body fat and contains 10 recommendations for reducing cancer risk:⁸

- (1) Body Fat- Be as lean as possible within the normal range of body weight;
- (2) Physical activity-Be physically active as part of everyday life;
- (3) Foods and drinks that promote weight gain-Limit consumption of energy-dense foods and avoid sugary drinks;
- (4) Plant foods-Eat mostly foods of plant origin;
- (5) Animal foods-Limit intake of red meat and avoid processed meat;
- (6) Alcoholic drinks-Limit alcoholic drinks;
- (7) Preservation, processing, and preparation-Limit consumption of salt; Avoid mouldy cereals (grains) or pulses (legumes);
- (8) Dietary supplements-Aim to meet nutritional needs through diet alone;
- (9) Breastfeeding (Special Recommendation)-Mothers to breastfeed; children to be breastfed;
- (10) Cancer survivors (Special Recommendation)-Follow the recommendations for cancer prevention.

Currently, the recommended level of fat in the diet is 20% to 35% of energy, with saturated fat intake limited to <10% and trans fatty acids limited to <3% of total energy intake. Some studies have suggested that omega-3 fatty acids may have specific benefits for cancer survivors, such as ameliorating cachexia, improving quality of life, and perhaps enhancing the effects of some forms of treatment.⁸

Adequate protein intake is essential during all stages of cancer treatment, recovery, and long-term survival. The best choices to meet protein needs are foods that are also low in saturated fat (eg,

fish, lean meat and poultry, eggs, nonfat and low-fat dairy products, nuts, seeds, and legumes). An intake of 10% to 35% of energy from protein, or at least 0.8 g/kg body weight, is recommended for the general population and will generally meet the protein needs of adult cancer survivors.⁸

Healthful carbohydrate sources are foods that are rich in essential nutrients, phytochemicals, and fiber, such as vegetables, fruit, whole grains, and legumes. These foods should provide the majority of carbohydrate in the diet. The recommended level of carbohydrate in the diet is 45% to 65% of energy intake for the general population. Vegetables and fruits contain numerous dietary constituents that potentially affect cancer progression, such as essential vitamins and minerals, biologically active phytochemicals, and fiber. Additionally, these are low energy dense foods that promote satiety, and thus may promote healthy weight management. Whole fruit (instead of juice) adds more fiber and fewer calories to the diet. When fruit juice is chosen, 100% fruit juice is the preferred choice.⁹

Whole grains are rich in a variety of compounds (in addition to fiber) that have important biologic activity, including hormonal and antioxidant effects. For example, whole grains contain antioxidants, such as phenolic acids, flavonoids, and tocopherols; compounds with weak hormonal effects such as lignans; and compounds that may influence lipid metabolism, such as phytosterols and unsaturated fatty acids. All of these compounds and their biologic effects have been hypothesized to reduce risk and progression of cancer as well as cardiovascular disease. Choosing whole grains and whole grain food products as a source of fiber, rather than relying on fiber supplements, adds nutritional value to the diet.^{1,5}

Dietary supplements include vitamins, minerals, herbs, botanicals, amino acids, and glandular products. Across various studies, the use of dietary supplements is reported by 25% to 80% of cancer survivors. There is little evidence, however, that dietary supplements can reproduce the benefit of a nutrient- and phytochemical-rich diet. Although many foods with certain nutrients have been demonstrated to be as effective in fighting off cancer, isolated consumption of these elements does not seem to be the answer. Several studies have found that when isolating the nutrients by extracting it from the food source it is naturally found in, no benefits regarding cancer prevention were found. However, when increased amounts of the whole food were used, cancers were limited.^{6,9}

Apart from the constituents of meal and its type, energy restriction is one of the most effective measures to prevent cancer. Careful menu planning brings about an approach entitled CRON-Calorie Restriction with Optimal Nutrition. The basic idea is to eat a reduced amount of food (about 70-80 percent of the amount required to maintain "normal" body weight) while still consuming all of the necessary amounts of vitamins, minerals, and other necessary nutrients. The only restriction is the total amount of energy (calories) that is consumed.⁵

Conclusion

To conclude, a cancer prevention diet is one that is high in fibre, low in salt, low in fat (especially animal fat), and includes generous portions of fruits and vegetables. It also minimizes or excludes alcohol. The best diets are pure vegetarian diets. *Eating well is not a guarantee that you won't get cancer, but it sure will put the odds in your favor!* Fortunately, the diet that best reduces cancer risk also helps fight heart disease, diabetes, stroke, hypertension, Alzheimer's disease, and most of the other diseases that occur in modern age. We have nothing to lose and everything to gain by making smart nutrition choices.

References

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Circular for Elections

Dear Members,

Ballot papers to all the eligible members are being dispatched by the election commissioner. If any member do not receive ballot paper by 10th Oct. 2010, please inform election commissioner Dr. Subir Gaungly (drsubirgaunguly@gmail.com) or Secretary General, Dr. Rajesh Vashistha (drvashistha@gmail.com) so that ballot paper can be sent before the elections.

Dr. Firuza Patel

President, AROI

Dr. Rajesh Vashistha

Secretary General (AROI)

Draft of Agenda for the AROI GBM to be held on Saturday i.e. 27th Nov. 2010 during the Annual National Conference of AROI.

1. Confirmation of the minutes of the last GBM
2. Minutes of discussion between AROI & BARC
3. Collaboration with ASTRO/ESTRO
Announcement of dates of AROI-ESTRO teaching program
4. Registration Fees for AROI life members: It is felt that the registration fee for life membership is very less as compared to other professional bodies. We are providing AROI Journal as well as Newsletter to members free of cost. So a contribution should be made from the registration fee towards Journal also. It is being proposed to charge a registration fee of Rs. 6000/- out of which Rs. 2000/- should go to AROI Journal.
5. Request for endorsement of various conferences by AROI
6. Election results to be announced by the election commissioner.
7. Next conference venue
8. Any other matter with the permission of the Chairperson



Half an hour after completion of GBM, extra ordinary GBM to be held

1. Charge takeover by the new elected members
2. Discussion & approval of the decisions taken during the GBM 1

Dr. Firuza Patel

President, AROI

Dr. Rajesh Vashistha

Secretary General, AROI

Agenda for ICRO GBM 1st

1. Discussion on progress of the ICRO teaching programme.
2. How to increase the awareness among AROI members to enroll for ICRO & strengthen the academic arm of the association.

ICRO GBM 2nd

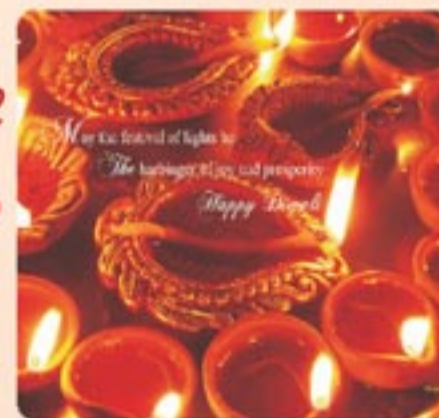
Dr P.K Julka
Chairman, ICRO

Dr. S. N. Senapati
Secretary ICRO

Greeting For

Id, Dushera, Diwali, Guruparab, Christmas

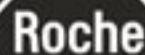
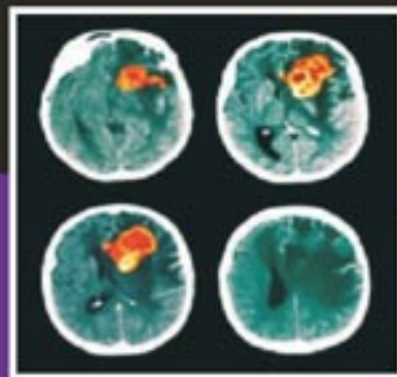
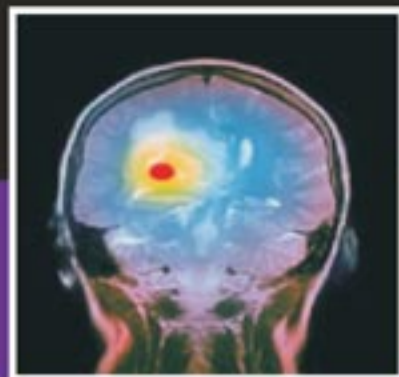
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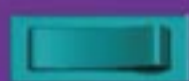
EDITORIAL BOARD NEWS LETTER

AROIJOURNAL

AVASTIN™

bevacizumab



Leading angiogenesis inhibition

Approved for

GBM

- Glioblastoma is an aggressive, invasive primary Brain Tumor¹
- Microvascular proliferation is a hallmark of glioblastoma²
- The VEGF ligand is the predominant regulator of tumor angiogenesis^{2,3}
- Avastin™ directly targets VEGF to specifically inhibit angiogenesis and regress existing tumor vasculature^{1,4}



ABRIDGED PRESCRIBING INFORMATION

Composition: Active ingredient: Bevacizumab (humanized anti-VEGF monoclonal antibody). Avastin is supplied in 100 mg and 400 mg preservative-free, single-use vials containing 4 ml or 16 ml of Avastin (25 mg/ml). **Indications:** 1. For the treatment of Colorectal Cancer. 2. First-line treatment of patients with metastatic Breast Cancer. 3. For treatment of unresectable, advanced, metastatic or recurrent Non-Small Cell Lung Cancer. 4. First-line treatment of patients with advanced and/or metastatic Renal Cell Carcinoma. 5. For the treatment of Glioblastoma with progressive disease following prior therapy, as a single agent. **Dosage and administration:** The recommended dose of Avastin, administered as an intravenous infusion, is 1. **Metastatic Colorectal Cancer:** First-line treatment: 5 mg/kg of body weight given once every 2 weeks or 7.5 mg/kg of body weight given once every 3 weeks. Second-line treatment: 10 mg/kg of body weight given every 2 weeks or 15 mg/kg of body weight given once every 3 weeks. 2. **Advanced or metastatic non-small cell lung cancer:** 7.5 mg/kg of body weight given once every 2 weeks or 15 mg/kg of body weight given once every 3 weeks. 3. **Advanced or metastatic Breast Cancer:** 10 mg/kg of body weight given once every 2 weeks or 15 mg/kg of body weight given once every 3 weeks. 4. **Advanced or metastatic renal cell carcinoma:** 10 mg/kg of body weight given once every 2 weeks. 5. **Glioblastoma:** 10 mg/kg of body weight given once every 2 weeks or 15 mg/kg of body weight given once every 3 weeks. It is recommended that Avastin treatment be continued until progression of the underlying disease. **Special dosage instructions (Dose modification):** Dose reduction of Avastin for adverse events is not recommended. The safety and efficacy of Avastin in children and adolescents, patients with renal impairment/hepatic impairment has not been studied. No dose adjustment is required in elderly. **Contraindications:** Patients with known hypersensitivity to any components of the product, Chinese hamster ovary cell products or other recombinant human or humanized antibodies. **Precautions:** 1. **Gastrointestinal Perforations:** Avastin should be permanently discontinued in patients who develop gastrointestinal perforation. 2. **Fistula:** Patients may be at increased risk for the development of fistula when treated with Avastin. 3. **Arterial Thromboembolism:** Avastin should be permanently discontinued in patients with TE (thromboembolic) events or any Grade 4 fistula. 4. **Hemorrhage:** Avastin should be permanently discontinued in patients who experience Grade 3 or 4 bleeding. Patients with recent pulmonary hemorrhage/hemoptysis should not be treated with Avastin. 5. **Hypertension:** Monitoring of blood pressure is recommended during Avastin therapy. Avastin should be permanently discontinued if hypertension cannot be adequately controlled with antihypertensive therapy or if the patient develops hypertensive crisis or hypertensive encephalopathy. 6. **Reversible Posterior Leukoencephalopathy Syndrome (RPLS):** In patients developing RPLS, treatment of specific symptoms including control of hypertension is recommended along with discontinuation of Avastin. 7. **Arterial Thromboembolism:** Avastin should be permanently discontinued in patients who develop arterial thromboembolic events. A history of arterial thromboembolic events, or age greater than 65, was associated with an increased risk of arterial thromboembolic events during Avastin therapy. 8. **Wound Thromboembolism:** Avastin should be discontinued in patients with life-threatening (Grade 4) pulmonary embolism; patients with < Grade 3 need to be closely monitored. 9. **Congestive Heart Failure:** Caution should be exercised when treating patients with clinically significant cardiovascular disease or pre-existing congestive heart failure with Avastin. 10. **Neutropenia:** Severe neutropenia, febrile neutropenia, or infection with severe neutropenia (including some fatalities) have been observed in patients treated with some myelotoxic chemotherapy regimens plus Avastin. 11. **Proteinuria:** In the event of Grade 4 proteinuria Avastin treatment should be permanently discontinued. 12. **Wound healing:** Avastin may adversely affect the wound healing process. Avastin therapy should not be initiated for at least 28 days following major surgery or until the surgical wound is fully healed. Avastin therapy should be withheld for elective surgery. 13. **Hypersensitivity reactions:** Patients may be at risk of developing infusion hypersensitivity reactions. If a reaction occurs, the infusion should be discontinued and appropriate medical therapies should be administered. 14. **Drug Interactions:** The effect of other co-administered chemotherapies (5-FU/UV, carboplatin-paclitaxel, Capecitabine, docetaxel, irinotecan, interferon alpha-2a, gemtuzumab, cisplatin) on Avastin clearance is considered not clinically significant. 15. **Microangiopathic hemolytic anemia (MAHA):** reported in patients treated with bevacizumab and sunitinib male combination. **Use in Pregnancy and Lactation:** Avastin should not be used during pregnancy. In women with childbearing potential, appropriate contraceptive measures are recommended during Avastin therapy and for at least 6 months following the last dose of Avastin. Women should be advised to discontinue nursing during Avastin therapy and not to breast feed for at least 6 months following the last dose of Avastin. **Side Effects:** From Clinical Trials: The most serious adverse events were Gastrointestinal perforations, Hemorrhage including pulmonary hemorrhages/hemoptysis, and Arterial thromboembolism. The most frequently observed adverse events were hypertension, fatigue or asthenia, diarrhea, and abdominal pain. The occurrence of hypertension and proteinuria with Avastin therapy are likely to be dose-dependent. Grade 3 and 4 laboratory abnormalities: hyperglycaemia, decreased haemoglobin, hypokalaemia, hyponatraemia, decreased white blood cell count, increased PT (prothrombin time), normalised ratio. From Post-marketing surveillance: Hypertensive encephalopathy (very rare), Reversible Posterior Leukoencephalopathy Syndrome (rare), Renal Thrombotic Microangiopathy, Nasal septum perforation, Pulmonary hypertension, Dysphonia, Gastrointestinal ulcer, hypersensitivity. Full details are available in the package insert. **Special Precautions for Storage:** Store vials in a refrigerator at 2°C-8°C. Keep vial in the outer carton in order to protect from light. DO NOT FREEZE. DO NOT SHAKE. Packs: Each pack contains a single use vial of 400mg/16ml or 100mg/4ml. (Current as February 2010)

References:

1. Data on file.
2. Seldi et al., Int J Cancer 2009; 125: 1054-1064
3. Lamszus et al., Clin Cancer Res 2003.
4. Salmaggi et al., J Neurooncol 2003.
5. Baluk et al., Curr Opin in Gene & Deve 2005; 15: 102-111

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ADD **Temodal**[®] temozolomide capsules



To Radiation After Surgery

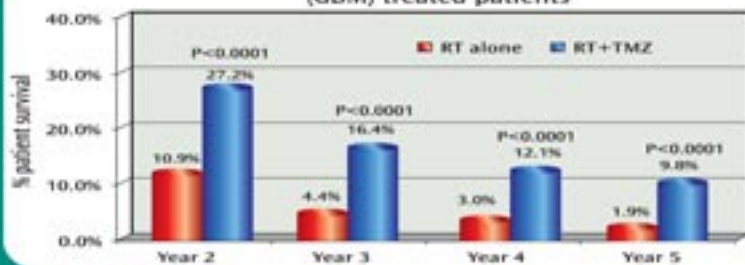
Significantly improves survival at 5 years.

61 month Updated Results of the EORTC/NCIC Phase III Randomized trial on Radiotherapy (RT) and Temozolomide (TMZ) versus Radiotherapy (RT) alone

TEMODAL[®] significantly increases survival when administered following surgery (concomitantly with radiotherapy) and then as adjuvant treatment.

- 37% reduction in the risk of death for patients treated with TEMODAL[®] and RT as compared to patients receiving only RT. [HR: 0.63 (0.53-0.75)]
- 9.8% of patients on Temodal[®] arm survived for more than 5 years as compared to only 1.9% patients on RT alone arm ($P < 0.0001$)

5 year survival data in Glioblastoma multiforme (GBM) treated patients¹



Conclusion:
The survival advantage conferred by the addition of TMZ to RT in GBM remains significant with longer follow-up

TMZ = Temozolomide

¹ Miralmanoff BS. Paper presented at: American Society for Therapeutic Radiology and Oncology (ASTRO) 49th Annual Meeting, October 28, 2007-November 1, 2007, Los Angeles, CA.



TEMODAL (Capsules) Brand of temozolomide (TMZ) DRUG ADMINISTRATION DESCRIPTION: Each TEMODAL Capsule contains 2 mg, 20 mg, 100 mg, or 200 mg temozolomide. **ACTION:** TEMODAL is an imidazoquinoline antineoplastic agent with antitumor activity. It exerts its cytotoxic effect through inhibition of the synthesis of DNA in the nucleus of tumor cells. **INDICATIONS AND USAGE:** Treatment of patients with newly diagnosed and recurrent glioblastoma multiforme (GBM) and anaplastic astrocytoma (AA). **Contraindications:** Patients with known hypersensitivity to any component of this product. **Warnings:** Patients should be monitored for myelosuppression, particularly neutropenia and thrombocytopenia. **Precautions:** Patients should be monitored for neurotoxicity, particularly fatigue, headache, and dizziness. **Adverse Reactions:** Common adverse reactions include fatigue, headache, dizziness, and nausea. **Drug Interactions:** Patients should be monitored for potential interactions with other medications. **Use in Specific Populations:** Patients should be monitored for potential adverse effects in elderly patients, pregnant women, and nursing mothers. **Information for Patients:** Patients should be informed of the potential risks and benefits of treatment with TEMODAL. **References:** Clinical trial data demonstrating the efficacy and safety of TEMODAL in combination with radiotherapy for the treatment of GBM and AA. **How Supplied:** TEMODAL capsules are available in 2 mg, 20 mg, 100 mg, and 200 mg strengths. **US Patent:** 6,800,000. **© 2007, Eisai Inc.**