



# NewsLetter

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## EDITORIAL

### LIFE AFTER COVID 19

In a few months when the tumult caused by the coronavirus subsides to a level where people and governments have stopped panicking, and more clues emerge on how to stay safe or battle this scourge, there may be time to appreciate just how much the world has changed. Life after Covid-19 -the world of tomorrow -- and it's right around the corner -- must be calmer, saner and more equitable. There is no us and them. We need each other as never before. And that is the power of Covid-19 -- to unite the world as a single home. It will change the way people work, live and travel.

It's true that millions are able to work from home, survive and even be productive. Government officials, private-sector employees — really, anyone who spends most of their time sitting at a desk in front of a computer in the office — are realising that they can do nearly the same by sitting at a desk in front of a computer at their homes. Home internet access is ubiquitous and largely affordable. So, after the Covid-19 pandemic dies down, why should anyone go to the office? The traditionalists may defend the practice to return to old ways, but even if 20 per cent of the organisations worldwide elect to adopt telecommuting, that would be a huge change to the world. There could be big change in tele education, tele consultation and telemedicine.

With fewer people travelling to work, busy restaurants in downtown locations will be forced to scaleback. The world could well be looking at a big drop in global employment. Meanwhile, advances from automation, artificial intelligence, and robotics will likely continue at a breathtaking pace — placing strains on a smaller workforce. The winners could be the environment, because of a shrinking urban sprawl and lower traffic density. Believers in the theory that Nature has a powerful way to auto-correct human excesses are asking: Was Covid-19 the vehicle that Nature deployed to do just this? We will know in a few years if the world returns to normalcy or if we end up getting used to a brand new normal.

Coronavirus is hitting the economy bad. Hopefully we will use this crisis to rebuild, produce something better and more humane. But we may slide into something worse. I think we can understand our situation — and what might lie in our future — by looking at other crises. Lockdown is placing pressure on the global economy. We face a serious recession. Businesses exist to make a profit. If they can't produce, they can't sell things. This means they won't make profits, which means they are less able to employ you. More people lose their jobs or fear losing their jobs. So they buy less. And the whole cycle starts again, and we spiral into an economic depression. What we need is a different economic mindset. COVID-19 has forever changed the experience of being a customer, employee, citizen and human being. Expect to see behavior changes for some time to come. What will change is the way we think? Biotechnology will be the next big Tech. Serology testing, vaccines will come in a big way. People may get classified as immune and nonimmune. Countries may stamp the Passport with immune positive known as immunity passports and other category could be vulnerable.

Indoor life after the Covid-19 outbreak will never be the same as before. Values will change, our lives and habits will change, and our homes will also change under that influence. With that in mind, here are few predictions for the changes that might occur. Houses not apartments - High-rise buildings were designed to organise as many people as possible in one place. Health and hygiene were not a consideration. We will all desperately want to have a house. It will be small. People will need a house that can effectively provide social isolation. We'll also be saying goodbye to one of the main trends of recent years: openspaces, with the entrance, living room, dining space and kitchen united. In the aftermath of the pandemic, the entrance area will be separated so that we can leave our shoes, clothing and belongings in the courtyard rather than carry dirt into the living quarters. We may also create a cleaning room featuring antiseptic dispensers. More attention will be given to the arrangement of the workplace at home. We may prefer shopping online.

Prepare for lives that are mostly indoors — and online

Executives and managers have the opportunity to choose quality work over quantity of work. They have the opportunity to emerge from this crisis with both healthier employees and better performing organizations. If the current round of social-distancing measures works, the pandemic may ebb enough for things to return to a semblance of normalcy. Offices could fill and bars could bustle. Schools could reopen and friends could reunite. But as the status quo returns, so too will the virus. This doesn't mean that society must be on continuous lockdown until 2022. But "we need to be prepared to do multiple periods of social distancing." Whether through accumulating herd immunity or the long-awaited arrival of a vaccine, the virus will find spreading explosively more and more difficult. It's unlikely to disappear entirely. Inequalities may widen: People with low incomes will be hardest-hit by social-distancing measures, and most likely to have the chronic health conditions. After Covid-19 begins ebbing, a secondary pandemic of mental-health problems will follow. Hugs, handshakes, and other social rituals will change forever. Elderly people, who are already excluded from much of public life, are being asked to distance themselves even further, deepening their loneliness. After the pandemic, people who recover from COVID-19 might be shunned and stigmatized. Health-care workers will take time to heal. People who went through long bouts of quarantine will carry the scars of their experience. Communities are finding new ways of coming together, even as they must stay apart. Attitudes to health may also change for the better. This pandemic will catalyze social change.

The bug has cared nothing for borders, passport, race, ethnicity, colour, age or wealth. It has been a great leveller of people and myths; We have a single planet. And it is time to mend our health and lifestyles; addressing wasteful consumerism, divisive politics, and climate. It is more likely that people and countries will realise, they need each other to survive.

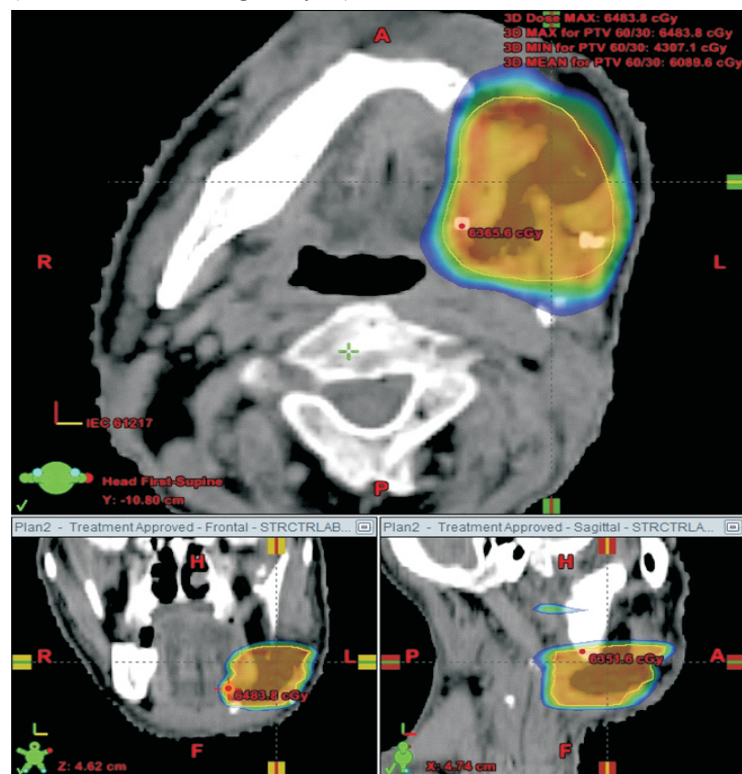


**Dr. A. K. Dewan**  
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## RECURRENCE IN HEAD AND NECK CANCER. IS SBRT A FEASIBLE TREATMENT OPTION?

Despite advances in oncological management in head and neck cancers (HNCs), about 15 to 50% patients will have recurrent disease. These recurrent disease could be the result of either in-field recurrence post radiotherapy or survivors developing second primary. Re-treatment in a recurrent head and neck cancer presents with a dilemma for oncologist as not many effective salvage options exists in this scenario. Understandably, loco-regional failure accounts for approximately 40–60% of deaths and is the most common cause of death, either directly or indirectly, in locally advanced HNCs despite improvements in multimodality care. Thus the need for finding newer and effective treatment strategies in recurrent HNCs is a constant battle. Although salvage surgery continues to be the treatment modality of choice, various patient and tumour factors such as disease progression, proximity to vital structures, and co-morbidities may render surgery infeasible. Resection of localized recurrence has demonstrated long-term local control rates of 25–45%; however, over half of these patients will recur locally. Currently, the criteria for selection of one treatment modality over the other in patients with recurrent, previously radiated and unresectable HNC are unclear. There are number of factors which can affect the selection of treatment like site of recurrence, volume of recurrent tumor, modality of previous treatment (Surgery or Radiation or both), time since previous treatment, operability and MIRI RPA class (Recursive Partitioning Analysis) etc.

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**Figure 1:** A patient being treated with re-irradiation using VMAT technique (a continuous IMRT delivery). As seen clearly in the image, slight spillage is present in the periphery of the target volume. The patient was planned for 60Gy to be delivered in 30 fractions.

With the recent widespread adoption of conformal radiotherapy techniques such as intensity-modulated radiotherapy (IMRT) and volume-modulated arc therapy (VMAT), the therapeutic ratio of re-irradiation have changed. Modern planning systems are better able to target gross tumor while simultaneously avoiding normal tissue. (Fig. 1) MIRI has given a good yardstick to measure patients who might benefit from re-irradiation, like those with good organ function, more than 1-2 years to previous radiotherapy or those where salvage surgery was feasible. Although, technical consideration like recurrent volume, doses to previous targets and organs at risk and current and previous planning techniques also need to be taken into account. Despite best measures, IMRT was able to provide 16-20 months of median overall survival with 26-40% patients surviving upto 2 years. Inherent radio-resistance was considered one of the reasons for early recurrence and therefore further modalities were assessed to treat and augment our survival outcomes.

The need to improve outcomes with previously irradiated, unresectable recurrent HNC has generated interest in the use of stereotactic body radiation therapy (SBRT). In contrast to conventional radiation, SBRT allows for more precise control of radiation dose distribution and shorter treatment durations (typically 5 fractions). Additionally, SBRT uses accelerated fractionation capable of delivering high doses of radiation per fraction. Despite the lower overall dose delivered over the course of a treatment, a beneficial biological equivalent dose delivered to the target tissue is achievable. Several series have reported low toxicity for SBRT in the treatment of recurrent HNC. SBRT could potentially be an ideal treatment for recurrent HNC since it is logistically easier for patients to go through this course of treatment, with lesser increase in toxicity compared to traditional radiation techniques.

Like any other modality, SBRT requires strict patient selection. Although, no specific criteria exists, but it is generally considered, the recurrence must be well visualized on imaging to ensure accurate delivery of ablative doses of SBRT. It should only be offered to those patients with relatively low-volume recurrent disease confined to a discrete focus or foci such that SBRT can be administered in a relatively safe manner.

Earlier studies done for SBRT in recurrent HNC aimed at assessing safety and efficacy of using such high doses at site with many critical organs. A large, single-institution report found that patients with an isolated neck recurrence had the lowest risk of late toxicity, while those with laryngeal and hypopharyngeal cancer had a 50 percent risk of grade 3 or greater toxicity following SBRT, significantly higher than at other sites (6 to 20 percent). The next logical step would comparing with standard re-irradiation techniques i.e. Intensity Modulated Radiotherapy (IMRT).

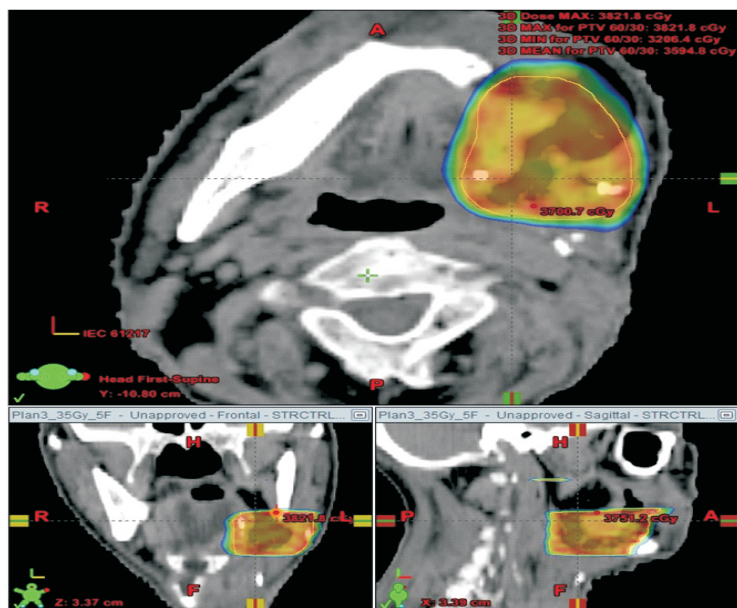
### SBRT Vs IMRT in recurrent HNCs

Both IMRT and SBRT techniques have radiobiologic and logistical considerations that complicate treatment selection. Conventionally fractionated IMRT is a protracted regimen which allows for tumor re-oxygenation and normal tissue repair during therapy. On the other hand, SBRT is designed as an ablative regimen which may incorporate alternative radiobiologic mechanisms such as direct vascular endothelial damage. The choice between these treatment options has thus far been informed by institutional practice patterns, physician comfort with the techniques, and patient preferences.

Despite inherent differences both in underlying biology and logistics, literature would seem to support relative equipoise in terms of toxicity and survival. Potential advantages of SBRT >35Gy being lower life threatening acute effects potentially favoring continued addition of novel systemic therapies especially for smaller tumor volumes and poor prognosis RPA class III patients. IMRT by allowing wider treatment volume may over advantage in larger tumors at higher risk of microscopic extension at the expense of additional acute toxicity.

A pooled analysis conducted by the American Association of Physicists in Medicine (AAPM) "HyTEC" working group analyzed 300 cases in





**Figure 2:** The SBRT dose delivery for the same patient (as in figure 1). Clearly seen from the image, the colour dose wash is well conformed to the target volume with minimal spillage and respecting all the SBRT target and OAR prescription criteria. The patient was planned for 35 Gy in 5 fractions.

eight publications; from their data modeling, 35 to 45 Gy (in five fractions) was associated with greater tumor control probability and overall survival compared with doses <30 Gy.

In the era of HPV triggered oropharyngeal tumours, many studies have

started showing that SBRT is an increasingly accepted option for salvage treatment and appears to offer improved overall survival in HPV positive versus HPV negative patients.

### Cyberknife™ (CK) powered SBRT in recurrent HNC

The use of CK (which has linear accelerator mounted on a robotic gantry) in recurrent HNC treated by SBRT have given higher precision and dose delivery accuracy. Through the development of very tight conformal dose distributions and steep dose fall-off at the periphery of the planning target volume, CK is considered a favourite solution in the context of stereotactic re-irradiation. (Fig 2) Heron et al published the results of a phase I dose escalation study on 25 patients, showing that it is feasible to administer up to 44 Gy in 5 fractions over 2 weeks. The use of co-registered FDG-PET for target delineation and the high accuracy of treatment delivery with CK might explain the safe achievement of the highest dose level without the occurrence of grade 3/4 or dose-limiting toxicity.

### Conclusion

Re-irradiation with IMRT and SBRT is better tolerated than historical controls. SBRT offers logistical advantages when compared to IMRT. Correct patient selection for re-irradiation with SBRT for recurrent HNC is the key to success and desirable outcomes. Cyberknife provides an excellent dose delivery accuracy required in a case of SBRT in recurrent HNC.

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### CANCER CARE DURING THE PANDEMIC

Data regarding the risks and severity of COVID-19 in cancer patients are constantly evolving. Two observational studies, one from Wuhan and other from New York City report increased risk of death and need for mechanical ventilation amongst cancer patients compared with matched controls. Moreover, older cancer patients were more likely to be intubated than older patients without cancer. This highlights that patients with cancer represent a vulnerable group to COVID-19, and steps should be taken to minimize their exposure to SARS-CoV-2.

Delivering specialized cancer care during the pandemic is highly challenging given the competing risks of death from cancer versus death from COVID-19. International Societies of Oncology such as ASCO and ESMO have issued guidelines for cancer care management during pandemic.

At RGCIRC Niti Bagh, we are following the international guidelines for the treatment of cancer patients in COVID era to provide best cancer care to our patients and at the same time keeping them safe. The practice of “one size fits all” approach to deliver cancer treatment during the COVID-19 pandemic does not work. Hence treatment is tailored and decisions are made on a case-by-case basis. Patients with COVID-19 symptoms or a known COVID-19 exposure are separately seen in flu clinic and tested for the virus. They are also evaluated for other causes of the respiratory symptoms apart from the disease progression in lungs (e.g. lymphangitic spread) or immunotherapy mediated pneumonitis. The Infectious Disease Society of America recommends SARS-CoV-2 RNA testing in asymptomatic individuals before immunosuppressive treatment such as dose dense and dose intense chemotherapy regimens, regardless of known exposure to COVID-19, but not for less immunosuppressive treatment such as single agent chemotherapy.

Importantly the decision to administer treatment is influenced by the

likelihood of cure or extension of life and the potential risk of delaying treatment and the patient's tolerance of treatment. In general we continue with the adjuvant chemotherapy, despite the threat of SARS CoV-2 infection during therapy and consider shorter treatment duration, where feasible because these patients are expected to derive a significant absolute survival benefit. For patients receiving palliative therapy for metastatic disease, the decision to continue

requires careful consideration of risks and benefits of continued treatment. We try to use some alternate less intensive schedules of chemotherapy or shift to oral metronomic treatments. Shared decision-making is of paramount importance. For those who are in deep remission after treatment, withdrawing maintenance treatment is an option. Similarly, the chemotherapy may be skipped for very early stage hormone receptor positive breast cancer and only hormonal therapy administered as an adjuvant treatment, since the added benefit of chemotherapy may be very low in this setting.

At the same time benefit of proper hand washing, hygiene, and minimizing exposure to sick contacts and large crowds cannot be overemphasized.

The human spirit is more resilient than any other threat on the planet. We have sailed through various pandemics in the past and this will also pass by.

We stand by you to fight cancer and pandemic together.

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Rajiv Gandhi Cancer Institute  
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## Stay HOME, Stay SAFE !!!

Social Distancing is the key to beat CORONA VIRUS .

Let's beat **Corona**, together.



## LIFE AFTER COVID 19

Maybe when all  
of this is over, we'll  
meet each other anew.  
Stronger, wiser, more  
connected to ourselves, and  
better able to enjoy and  
appreciate the people  
and things that  
really matter.

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