Smoking Cessation before Oncological Treatment: Clinical Audit

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Objective:

Smoking cessation is crucial after cancer diagnosis as it affects survival, recurrence, treatment toxicity and quality of life. The National Comprehensive Cancer Network (NCCN)[1], European Society for Medical Oncology (ESMO)[2], European Society for Oncology and Radiology (ESTRO) suggest smoking cessation before oncological treatment, while Royal College of Radiologists (RCR)[3] further advise informed consent about smoking effect on radical radiotherapy before treatment by oncologists. This clinical audit studied compliance rate of smoking cessation counseling along with 5 major components in NCCN: smoking status exploration, nicotine dependence inquiry (in pack year), smoking effects on oncological treatment explanation, cessation advices and cessation program referral.

Methods:

This single-center audit reviewed the outpatient clinics before patients proceeded to radical RT to H&N or thoracic regions, from 1st Jun – 30th Nov 2024 via ePR.

Department of Health: Smoking Cessation Leaflet

Results:

A total of 139 patients was included and 94 (67.6%) had smoking status asked. Among the 29 active smokers, 34.5% had nicotine dependence explored, 0% had smoking effects on treatment explained, 20.7% had cessation advices given and 0% had cessation referral (Table 1).

	Compliance Rate		
	Audit	Re-Audit	p value
Smoking History	67.6%	100%	<0.0001
Pack Year	34.5%	75.0%	0.0006
Explain Smoking Effect on Tx	0%	93.2%	<0.0001
Cessation Advice	20.7%	93.2%	<0.0001
Cessation Referral	0%	77.3%	<0.0001

Table 1. Compliance rate of the 5 major components in audit and re-audit

Discussion:

The suboptimal compliance could be due to insufficient documentation, limited clinic time, unaware of clinical importance, unfamiliar of smoking history, doubtful of successful cessation and uncertain of referral resource.

Action Plan:

The followings were executed to improve compliance:

- •Raise awareness of smoking cessation
- •Highlight its importance on improving treatment outcomes
- •Advocate compliance on NCCN guideline
- •Distribute smoking cessation leaflet in OPD (Figure 1)
- •Refer to PWH smoking cessation management

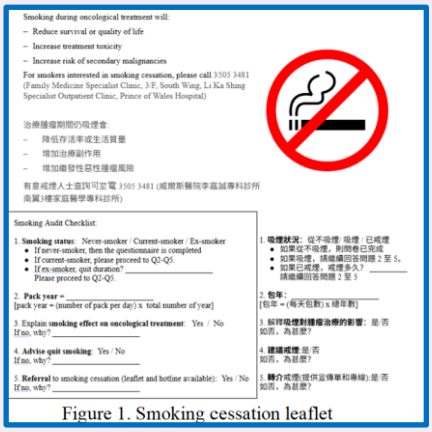

Figure 1. Smoking cessation leaflet

Re-audit

After the implementation of action plan, re-audit was performed from May–Oct 2025.

Re-audit Results:

A total of 184 patients was included and all (100%) had smoking status asked. Among the 44 active smokers, 75.0% had nicotine dependence explored, 93.2% had smoking effects on treatment explained, 93.2% had cessation advices given and 77.3% had cessation referral. All 5 major components showed improving compliance rates with statistical significance in Chi-Square test (Table 1). This could be due to improving documentation, better understanding of smoking impact on RT and greater awareness of cessation referral resource.

Conclusion:

This audit showed suboptimal compliance of smoking cessation on NCCN guideline in our center. Action plan was therefore introduced. Re-audit was later performed which showed improving compliance with statistical significance.

Reference:

1. Shields, Peter G., et al. "Smoking cessation, version 3.2022, NCCN clinical practice guidelines in oncology." Journal of the National Comprehensive Cancer Network 21.3 (2023): 297-322.
2. Krech, R., et al. "Tobacco cessation and the role of ESMO and medical oncologists: addressing the specific needs of cancer patients in times of the COVID-19 pandemic." ESMO open 8.3 (2023): 101579.
3. www.rcr.ac.uk/RT-consent-forms