

出國報告（出國類別：開會）

2018 歐洲放射腫瘤學會亞洲會議出國報告

服務機關：台中榮總放射腫瘤部
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摘要

歐洲放射腫瘤學會(縮寫 ESTRO)聯合學術年會，英文全名為 European Society for Therapeutic Radiotherapy & Oncology 是一個非營利性科學組織，目的在提升放射腫瘤學的合作，以及癌症的整合性治療，以改善病人的照護為目標。ESTRO 超過 5000 位全球會員，包含放射腫瘤學專業人士如放射腫瘤科醫師、醫學物理學家、放射生物學家、放射腫瘤專業護理師和放射師等，為歐洲放射腫瘤學界最大最重要的一個學術交流平台，也是全球第二大放射腫瘤學界學術組織(另一個為美國放射腫瘤學會(ASTRO, American Society for Therapeutic Radiotherapy & Oncology)。

本次會議選於亞洲地區主辦，會議內容包羅萬象，包含最新癌症治療趨勢、學術論文分享等。與會國家包含日本、韓國、中國、印度等亞洲國家，提供一個絕佳的平台進行學術交流及臨床經驗的討論。

關鍵字：放射治療

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本文

- 一、目的：參加國際學術會議，吸收最新研究知識與趨勢。
- 二、過程：會議日期自 2018 年 12 月 06 日至 12 月 09 日。
- 三、心得：

歐洲放射腫瘤學會(縮寫 ESTRO)聯合學術年會，英文全名為 European Society for Therapeutic Radiotherapy & Oncology 是一個非營利性科學組織，目的專注於跨學科性和多學科性的社會，輻射腫瘤學家，醫學物理學家，放射生物學家，短程治療師和放射治療師有機會與其他腫瘤學組織進行接觸，共同致力於改善癌症治療。ESTRO 超過 5000 位全球會員，包含放射腫瘤學專業人士如放射腫瘤科醫師、醫學物理學家、放射生物學家、放射腫瘤專業護理師和放射師等，為歐洲放射腫瘤學界最大最重要的一個學術交流平台，也是全球二大放射腫瘤學界學術組織(另一個為美國放射腫瘤學會(ASTRO, American Society for Therapeutic Radiotherapy & Oncology))。

本次會議選於新加坡舉辦。新加坡地處馬六甲海峽的出入口，是東南亞最大海港，也是聯繫亞、歐、大洋洲的重要國際航空中心。人口組成包含華人、馬來人及印度人等，其文化多樣性令人驚艷。英文為新加坡主要官方語言，與當地居民均能以英文流暢溝通，亦是令人印象深刻之處。

大會主題主要包含三大領域：臨床醫學(頭頸癌、婦科骨盆腔癌症、胸腔癌症等)、輻射生物及輻射物理。邀請亞洲地區有經驗的醫師及物理師，分享癌症治療新知及臨床治療經驗。場外亦有論文海報陳列區，可以學習各國治療的經驗及研究成果。

我有幸與會以海報的形式分享研究成果。我研究的對象為舌癌的病患。舌癌屬於較為侵襲性的癌症，且預後較其他種類口腔癌差。手術為早期舌癌主要的處置方式，其存活率為 65-85%。然而舌癌術後之病患常常有復發的情形。目前針對早期舌癌術後是否加輔助性治療仍有爭議。過去一些研究指出早期舌癌術後輔以放射線治療對病患有好處，但放射治療也會造成毒性反應及副作用。我的研究是屬於回溯性研究，希望可以找到一些新的、沒有被報告過的預後因子。在會場我也看到不少針對頭頸部癌症的研究，分析不同治療技術及不同藥物對於疾病的影響。我希望盡快將結果撰寫論文發表，供未來臨床治療或設計新治療模式時參考。希望嘉惠以後的病人。

另外我也有參與臨床醫學的演講，而我挑選與自己研究相關的頭頸部領域主題。演講內容討論到針對 p16 染色陽性的口咽部癌症，雖其預後較好，其目前仍無證據顯示可以調降其治療的強度。此外，有專家提到接受誘導性化療(induction chemotherapy)的口咽癌患者，目前有研究針對其化療後反應的好壞，去調整後續放射治療的強度。

本科頭頸部癌症的治療頗有成績，且有一大部分的病患接受誘導性化療。此次演講的內容對我後續的臨床訓練頗有啟發。

大會有其中一個節目是讓醫師上台發表自己近期的研究成果。有不少年輕醫師上台發表自己的研究，十分激勵我的研究動力，同時也讓我了解口語表達與語文能力在國際會議上的重要性。在準備的過程中，我不但對自己研究的議題有更深入的了解，也從科裡的老師身上學到不少研究經驗。往後我將會更努力投入臨床及研究，把握參與國際會議的機會。

四、建議事項：

1. 本次大會有不少其他國家年輕醫師上台報告，其台風及語文能力均十分卓越。除期許自己的能力能進步，也期盼院內的環境能持續鼓勵年輕醫師參與國際會議，拓展視野。
2. 這次主辦國新加坡，市民道德水準高，市容十分整齊，且英文能力普遍良好，是台灣可以借鏡之處。
3. 感謝院方長官的支持，讓我有機會參加國際學術會議，對我國際視野的提升以及未來學術研究的動力有所助益。

五、附錄：

1. 本人發表壁報論文摘要及詳細內容

Results of surgery for early tongue cancer and effects of adjuvant RT in patients with risk features

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Keyword: Tongue, squamous cell carcinoma, surgery, adjuvant radiotherapy

Purpose:

To investigate 1) long-term outcome and prognostic factors in patients with early tongue cancer treated by surgery alone and 2) the effect of adjuvant radiotherapy (RT) in the subgroup patients with pathologically risk features.

Materials and Methods:

Treatment outcome of 199 patients with previously untreated, biopsy-proven squamous cell carcinoma of tongue, clinical stage T1-2N0M0 and received surgery alone between February 2007 and December 2014 were retrospectively analyzed. After obtaining significant prognostic factors, additional 23 patients with same condition who received surgery followed by adjuvant RT during the same study period were collected. We investigated the effect of adjuvant RT on loco-regional control in the subgroup patients with these risk features.

Results:

After a medial follow-up of 89 months, there were 53 recurrences and 34 deaths among the 199 patients. The 5-year overall survival (OS) and locoregional failure-free survival (LRFFS) rates were 83.9% and 72.4%, respectively. Univariate analysis revealed that poor differentiated histology ($p=0.0099$), invasion depth over 5 mm ($p=0.0028$), tumor size over 2 cm ($p=0.0001$) and perineural invasion (PNI, $p=0.0049$) affected OS. Similarly, poor differentiated histology ($p=0.0001$), invasion depth over 5 mm ($p=0.0839$), and PNI ($p=0.0721$) affected LRFFS. Other variables, including age, gender, smoking history, elective neck dissection, lymphovascular invasion, and close resection margin (≤ 3 mm) had no significant impacts on both OS and LRFFS. Multivariate analysis showed that poor differentiated histology ($p=0.0119$) and tumor size ($p=0.0056$) were independent predictors for OS, but only poor differentiated histology ($p<0.0001$) could predict LRFFS. Then, we chose 3 risk features (poor differentiated histology, invasion depth over 5 mm, and PNI) and re-analyzed the outcome. The 5-year OS and LRFFS were 71.0% vs. 91.7% ($p=0.0002$) and 64.3 % vs 77.5% ($p=0.0120$) for patients with ($n=75$) versus without ($n=124$) at least one

risk factors (poor differentiated histology, invasion depth over 5 mm, and PNI).

In the subgroup patients with risk features, adding postoperative adjuvant RT reduced relapse rates from 34.7% to 13.0% ($p=0.0469$). The LRFFS rates at 5-year were 84.0% vs. 64.3% ($p=0.0473$) for patients who received or not received RT.

Conclusions:

An overall relapse rate of 26.6% was observed for patients with early tongue cancer treated by surgery alone. Patients with pathologically risk factors (poor differentiated histology, invasion depth over 5 mm, and PNI) had significantly worse survivals. Adding postoperative adjuvant RT improved loco-regional control for these high risk patients.

2. 照片記錄





Results of surgery for early tongue cancer and effects of adjuvant RT in patients with risk features

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Abbreviations:
 OS, overall survival; LRRFS, loco-regional relapse-free survival; WE, wide excision; ND, neck dissection; SCC, squamous cell carcinoma; HR, hazard ratio; LVI, lymph-vascular invasion; PNI, peri-neural invasion; CI, confidence interval; R/T, radiotherapy

Purpose:

To investigate

- (1) Long-term outcome and prognostic factors in patients with early tongue cancer treated by surgery alone
- (2) The effect of adjuvant radiotherapy (RT) in the subgroup patients with pathologically risk features.

Materials and Methods:

- Retrospective study
- The inclusion criteria:
 - ✓ Previously untreated
 - ✓ Biopsy-proven SCC of tongue
 - ✓ Clinical stage T1-2N0M0
 - ✓ Receiving surgery alone initially
 - ✓ Not receiving adjuvant R/T
- Between 2007/02 ~ 2014/12
- The chart records and images of 199 eligible patients were reviewed.

Results:

Patients demographic and baseline characteristics (n=199)

Characteristics	No. of cases	Percent
Age (years)		
Range	27-86	
Median	52	
Mean	52	
50 yrs	78	39.2
50yrs	121	60.8
Sex		
Male	165	82.9
Female	34	17.1
Smoking		
Quit usage or never	66	33.1
Current usage	133	66.9
Operation		
WF + ND	163	81.8
WL alone	66	48.2
Differentiation		
SCC, well differentiated & moderate differentiated	174	87.4
SCC, poor differentiated	25	12.6
Tumor depth		
≤5mm	145	72.9
>5mm	54	27.1
Tumor size		
≤2cm	166	83.4
>2cm	33	16.6
Closest margin		
≤5mm	138	67.8
>5mm	64	32.2
LVI		
Negative	197	99.0
Positive	2	1.0
PNI		
Negative	185	93.0
Positive	14	7.0



Recurrence pattern (n=199)

- Medial follow-up of 89 months

All recurrence N= 53 (26.6%)	
Local recurrence (LR) N = 21 (10.5%)	Regional recurrence (RR) N = 32 (16.1%)
Distant metastasis (DM) alone N = 0 (0%)	
LR alone N = 18 (9.0%)	RR + DM N = 6 (3.0%)
LR + DM N = 3 (1.5%)	RR alone N = 26 (13.1%)

Univariate & Multivariate analysis (n=199)

Table 1. Risk factors affecting OS

Characteristics	Univariate HR (95% CI)	P value	Multivariate HR (95% CI)	P value
Age (years)	0.99 (0.97, 1.01)	0.0024	0.99 (0.97, 1.01)	0.0024
Sex	0.99 (0.42, 2.31)	0.9886	0.99 (0.42, 2.31)	0.9886
Operation	0.76 (0.41, 1.41)	0.3917	0.76 (0.41, 1.41)	0.3917
Differentiation	0.90 (0.41, 2.00)	0.8050	0.90 (0.41, 2.00)	0.8050
Tumor depth	2.41 (1.51, 3.85)	0.0024	2.41 (1.51, 3.85)	0.0024
Tumor size	1.91 (0.78, 4.65)	0.2025	1.91 (0.78, 4.65)	0.2025
Closest margin	1.74 (0.70, 4.30)	0.2310	1.74 (0.70, 4.30)	0.2310
LVI	1.20 (0.20, 7.00)	0.8620	1.20 (0.20, 7.00)	0.8620
PNI	1.84 (0.51, 6.67)	0.3820	1.84 (0.51, 6.67)	0.3820

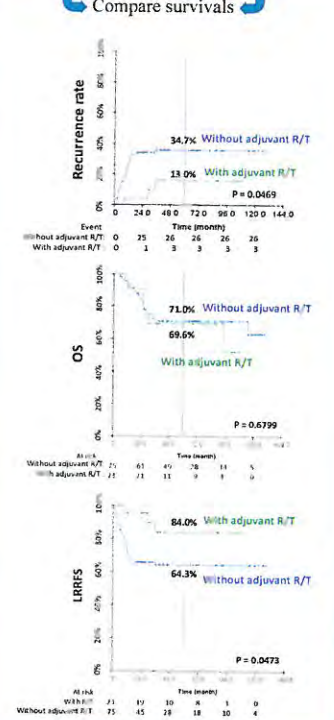
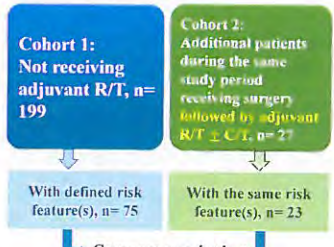
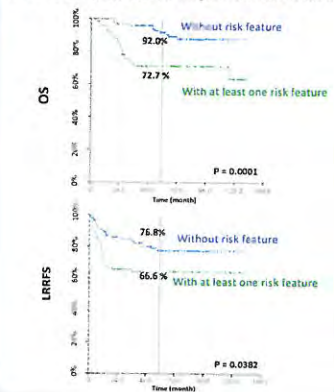
Table 2. Risk factors affecting LRRFS

Characteristics	Univariate HR (95% CI)	P value	Multivariate HR (95% CI)	P value
Age (years)	0.99 (0.97, 1.01)	0.0024	0.99 (0.97, 1.01)	0.0024
Sex	0.99 (0.42, 2.31)	0.9886	0.99 (0.42, 2.31)	0.9886
Operation	0.76 (0.41, 1.41)	0.3917	0.76 (0.41, 1.41)	0.3917
Differentiation	0.90 (0.41, 2.00)	0.8050	0.90 (0.41, 2.00)	0.8050
Tumor depth	2.41 (1.51, 3.85)	0.0024	2.41 (1.51, 3.85)	0.0024
Tumor size	1.91 (0.78, 4.65)	0.2025	1.91 (0.78, 4.65)	0.2025
Closest margin	1.74 (0.70, 4.30)	0.2310	1.74 (0.70, 4.30)	0.2310
LVI	1.20 (0.20, 7.00)	0.8620	1.20 (0.20, 7.00)	0.8620
PNI	1.84 (0.51, 6.67)	0.3820	1.84 (0.51, 6.67)	0.3820

According to univariate and multivariate analysis, we chose 3 risk features:

- Poor differentiated histology
- Invasion depth over 5 mm
- Perineural invasion (PNI)

and we investigate the impact on survivals.



Conclusion

- 1-1. An overall relapse rate of 26.6% was observed for patients with early tongue cancer treated by surgery alone.
- 1-2. Patients with pathologically risk factors (poor differentiated histology, invasion depth over 5 mm, or PNI) had significantly worse survivals.
2. Adding postoperative adjuvant RT improved loco-regional control for these high risk patients.

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