原文題目(出處)：	4 Gy single fraction palliative radiotherapy for the treatment of painful recurrent soft palate carcinoma by high-dose-rate mold brachytherapy: A case report
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內文：

Introduction

1. Treatment choices for recurrent head and neck cancer (occurrence rate: 20-40 %)

(1) Curative surgery: Tumor spread and patient's condition → often not possible

Radical course of external beam radiotherapy:

Causing excessive morbidity

(2) Re-irradiation with high dose

i. After loading iridium 192 implants:
- Limited treatment with minimal radiation to the surrounding tissue

ii. Combining a mold and a remote after loading unit with an iridium 192 microsourse:
-Less invasive
-For superficial oral carcinoma

2. Purpose:

使用4 Gy single fraction high-dose-rate mold brachytherapy作爲painful recurrent soft palate carcinoma之保守療法的病例報告。

Case report

* 73 y/o male

April 2000: SCC, right soft palate, staged as T2N0M0

→ primary radiation therapy, external beam irradiation (60Gy/ 30 fractions/ 45 days) with a 4 MV beam by opposed lateral portals

→ tumor disappeared macroscopically

August 2000: recurrent carcinoma, right soft palate(原放射線照射處)

→ external beam irradiation (30 Gy/ 15 fractions/ 23days) with a 4 MV beam by opposed lateral portals

→no change in tumor size

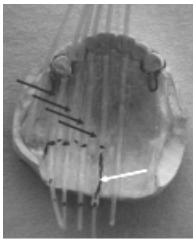
March 2001: soft palate pain, tumor regrowth, CT showed painless multiple bone metastases

→high-dose-rate mold radiotherapy with Microselectron-HDR, as palliative radiotherapy

→ tumor did not increase in size; reduction of pain, improved eating ability

August 2001: died of interrecurrent disease with pleural metastases

* High-dose-rate mold radiotherapy:



1. Mold

① resin dental mold to fit the jaw

② 4 flexible parallel afterloading tubes, 10mm apart from each other, 5mm away from mold surface

③ thickened mold surface to minimize radiation to tongue and mandible

2. Dose

理想上是使用12Gy, 3 times in 1 week, 但因爲patient的狀況不佳，只能使用4 Gy

一次

Discussion

1. First primary head and neck tumors → radiotherapy or surgery
2. External beam irradiation:

(1) 治療oral cavity , pharynx, and larynx carcinomas時，pharynx常在放射線的治療範圍內

(2) 即使是最小劑量也常會超過50 Gy

3. Second primary tumor或recurrent tumor

(1) Re-irradiation with optimum dose external beam irradiation

-要完全治癒tumor不可能不造成excessive morbidity

(2) Brachytherapy

-是比較能被接受的，因爲其target較小，適應性高，且可使用mandibular lead shielding來避免osteoradionecrosis的發生

-有人建議用來治療早期velotonsillar area的second primary tumors

4. High-dose-rate mold brachytherapy

(1) Early-staged cancers: 有些報告指出可達到一定程度的控制效果

(2) Oropharynx cancer, early stage or recurrent: 本篇作者認爲可作爲recurrent cancer的保守療法，因爲在這個病例中，雖然tumor沒有變小，但減輕的疼痛已大爲提升了病人的生活品質。

5. 曾有報告提出對於metastatic bone pain，a single fraction of 8 Gy是安全而有效的。同理，對於painful recurrent soft palate tumor，4 Gy single fraction high-dose-rate mold brachytherapy也可能是有幫助的。

6. 綜合上述，mold therapy因較不具侵犯性，且爲short duration，所以適用於緩解recurrent cancer疼痛。但病例數還太少，還不能下定論。有待深入探討的觀點包括: 安全性、效率、劑量、間隔等。

題號	題目
1	關於oropharyngeal carcinoma的敘述，以下何者爲非? (A) 因位於口腔後方，病人不易察覺，而常延誤診斷與治療 (B) 其tumor size比發生於口腔前方的tumor size大，且較易轉移 (C) 其中有3/4來自於tongue base，其次爲tonsillar area或是soft palate (D) 初始症狀通常爲疼痛、吞嚥困難
答案 (C)	出處：Oral and maxillofacial pathology, 2nd edition, p363, “three of every four oropharyngeal carcinomas arise from the tonsillar area or soft palate; most of the others originate on the base of the tongue”
題號	題目
2	關於x-irradiation與oral cancer，以下敘述何者錯誤? (A) Decreases immune reactivity (B) Produce abnormalities in chromosomal reactivity (C) 頭頸部的radiotherapy會增加new primary oral malignancy的發生率，但並非dose dependent (D) 牙科診斷用X光與oral mucosal carcinoma目前並無直接關聯
答案 (C)	出處：Oral and maxillofacial pathology, 2nd edition, p358, “…radiotherapy to the head and neck area increases the risk of the later development of a new primary oral malignancy,….This effect is dose dependent,…”