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## Stereotactic radiation therapy for stage I non-small cell lung cancer

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The VU University Medical Center has research agreements with Varian Medical Systems, Inc. and Velocity Medical Solutions, Inc.

## List of Publications

Dahele M, **Palma D**, Lagerwaard F, Slotman B, Senan S. Pulmonary changes after stereotactic body radiation therapy for stage I lung cancer. *Journal of Thoracic Oncology*, in press.

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# Curriculum Vitae

David Anthony Palma was born August 5, 1978 in London, Ontario, Canada. He attended Jean Vanier Elementary School and Catholic Central High School, and after graduation in 1997 moved to Kingston, Canada where he earned a Bachelor's Degree in Life Sciences from Queen's University. In 2000 he returned to London, Ontario to study Medicine at the University of Western Ontario, where he first became interested in Radiation Oncology and cancer research.

After graduation from medicine, David began his Radiation Oncology residency program at the British Columbia Cancer Agency in Vancouver. During this time his research focused on patient outcomes and new radiotherapy techniques. He was the chief resident in Radiation Oncology in 2008. In 2009 he completed his Radiation Oncology exams to become a Fellow of the Royal College of Physicians of Canada. In 2009-2010, David completed a Master's Degree in Epidemiology from the Harvard School of Public Health and a research fellowship in SBRT at the VU University in Amsterdam.

In 2001, when David was a second-year medical student, he met a first-year medical student named Cheryl Smits on her very first day at school. Four years later they married. David and Cheryl have two children: Kiara, born in August 2008 (whose favourite song is *Hansje Pansje Kevertje*), and Adam, born in August 2010. They are now living in London, Ontario, where Cheryl has a Family Medicine/Obstetrics practice, and David is a Radiation Oncologist and Clinician-Scientist at the London Regional Cancer Program.

## Selected List of Abbreviations

3D-CRT	Three-dimensional conformal radiotherapy
4D-CT	Four-dimensional computed tomography
BED	Biologically effective dose
CBCT	Cone-beam CT
CCI	Charlson comorbidity index
CI	Confidence Interval
COPD	Chronic obstructive pulmonary disease
CSS	Cause-specific survival (synonym: disease-specific survival)
CT	Computed tomography
CTC-AE	Common terminology criteria for adverse events
CTV	Clinical target volume
CurRT	Curative-intent radiotherapy (synonym: radical intent) (often considered as 45 Gy in 15 fractions or higher doses)
DVH	Dose-volume histogram
ECOG	Eastern Cooperative Oncology Group
FDG	18-fluorodeoxyglucose
FEV1	Forced expiratory volume in 1 second
FVC	Forced vital capacity
GGO	Ground glass opacification
GOLD	Global Initiative for Chronic Obstructive Lung Disease
GTV	Gross tumor volume
Gy	Gray; the SI unit of radiation dose
HR	Hazard ratio
HU	Hounsfield unit
IMRT	Intensity modulated radiation therapy

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MLD	Mean lung dose
NSCLC	Non-small-cell lung cancer
OAR	Organ at risk
OS	Overall survival
PallRT	Palliative-intent radiotherapy (often considered as 40 Gy in 15 fractions or lower doses)
PET	Positron emission tomography
ppo-FEV1	Predicted post-operative forced expiratory volume in 1 second
PTV	Planning target volume
RP	Radiation pneumonitis
RT	Radiotherapy
SBRT	Stereotactic body radiation therapy
VATS	Video-assisted thoracoscopic surgery
VMAT	Volumetric modulated arc therapy
V <sub>x</sub> (e.g. V <sub>5</sub> )	Volume of lung (in percent) receiving $x$ Gray or more (e.g. volume of lung receiving 5 Gray or more)



## Definitions of Statistical Terms and Outcomes

Confidence Interval	A range of values likely to contain the true population parameter with a specified precision (usually 95%). For normally-distributed data, the boundaries of a 95% confidence interval are the mean $\pm$ 1.96 x standard error
Disease-specific survival	Time until death due to a specified disease (e.g. lung cancer) (synonym: cause specific survival)
Distant metastasis	Progression of disease at sites of the body beyond the primary tumor or regional nodes, usually via hematogenous spread
Hazard ratio	The effect of a variable (e.g. treatment) on the hazard or risk of an event (e.g. death); similar to a relative risk
Local control	Absence of disease progression at the primary tumor site
Locoregional control	Absence of disease progression at the primary site and the regional lymph nodes
Overall survival	Time until death from any cause
Palliative intent	Treatment with the goal of reducing the symptoms of disease, without curing the disease
Radical intent	Treatment with a goal of eradicating known cancer
Regional control	Absence of disease progression in the regional lymph nodes



