



XXVI CONGRESSO NAZIONALE AIRO
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Società Italiana di Radiobiologia



Stereotactic body radiotherapy (SBRT) for locally advanced pancreatic cancer (LAPC): a retrospective multi- institutional experience

G. Macchia, A. Arcelli, A.G. Morganti, F. Bertini, A. Guido, L. Fuccio, S. Cilla, V. Scotti, M.E. Rosetto, I. Djan, S. Parisi, G.C. Mattiucci, V. Valentini, M. Fiore, P. Bonomo, A. Bacigalupo, R.M. Niespolo, P. Gabriele, F. Deodato



Background

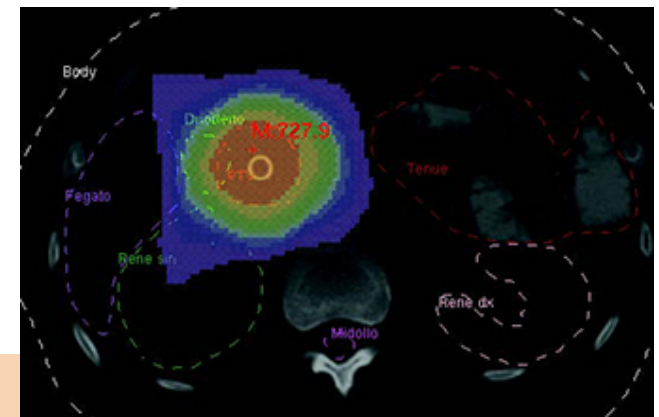
2030→Pancreatic carcinoma the 2[^] leading cause of cancer mortality.

At diagnosis, 30% pts→LAPC→intermediate prognosis between resectable and metastatic pts (median OS ranging from 5 to 11 months).

A treatment option for LAPC is radio-chemotherapy (RCT).

One emerging technique SBRT deliver a higher biologically effective dose of precisely targeted radiation in a short course of therapy.

Conformity and rapid dose fall-off associated with SBRT offer the potential for dose escalation.





2015

Systematic review

SBRT in pancreatic cancer: What is the therapeutic window?

Thomas B. Brunner^{a,*}, Ursula Nestle^a, Anca-Ligia Ciuleanu^a

^aDepartment of Radiation Oncology, University Hospitals Freiburg, Germany



2016

Hypofractionated

pancreatic cancer

2-year OS rates

acute and late toxicity

2-year local control (LC) rates ranged from 50–92%
2-year OS rates following SBRT ranged from 29–74%
Acute and late grade ≥ 3 toxicity of 0–12.5% and 0–22.3%

pancreatic cancer: Lessons from the hypofractionated SBRT on therapy

David P. Horowitz^{a,b,c}, Rosario^{b,c}, Alongi Filippo^b, Samuel K. Kim^a



SBRT for pancreatic body radiotherapy for the pancreas: a critical review for the medical oncologist

2016

Samuel K. Kim, Cheng-Chia Wu, David P. Horowitz

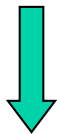
J Gastrointest Oncol 2016;7(3):479–486

CLINICAL TRANSLATIONAL THERAPEUTICS

Quality of Life and Toxicity of Stereotactic Radiotherapy in Pancreatic Tumors: A Case Series

Gabriella Macchia,¹ Alessio G. Morganti,^{1,2,5} Savino Cilla,³ Edy Ippolito,¹ Mariangela Massaccesi,¹ Vincenzo Picardi,¹ Gian Carlo Mattiucci,⁵ Pierluigi Bonomo,¹ Rosa Tambaro,² Fabio Pacelli,⁴ Angelo Piermattei,³ Marco De Spirito,³ Vincenzo Valentini,⁵ Numa Cellini,⁵ and Francesco Deodato¹

2012



2016



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ScienceDirect

journal homepage: <http://www.elsevier.com/locate/rpor>



Original research article

Individually optimized stereotactic radiotherapy for pancreatic head tumors: A planning feasibility study



Milly Buwenge^{a,1}, Savino Cilla^{b,*,1}, Alessandra Guido^a, Lucia Giaccherini^a, Gabriella Macchia^c, Francesco Deodato^c, Silvia Cammelli^a, Francesco Cellini^d, Gian C. Mattiucci^d, Vincenzo Valentini^d, Markus Stock^{e,1}, Alessio G. Morganti^{a,1}

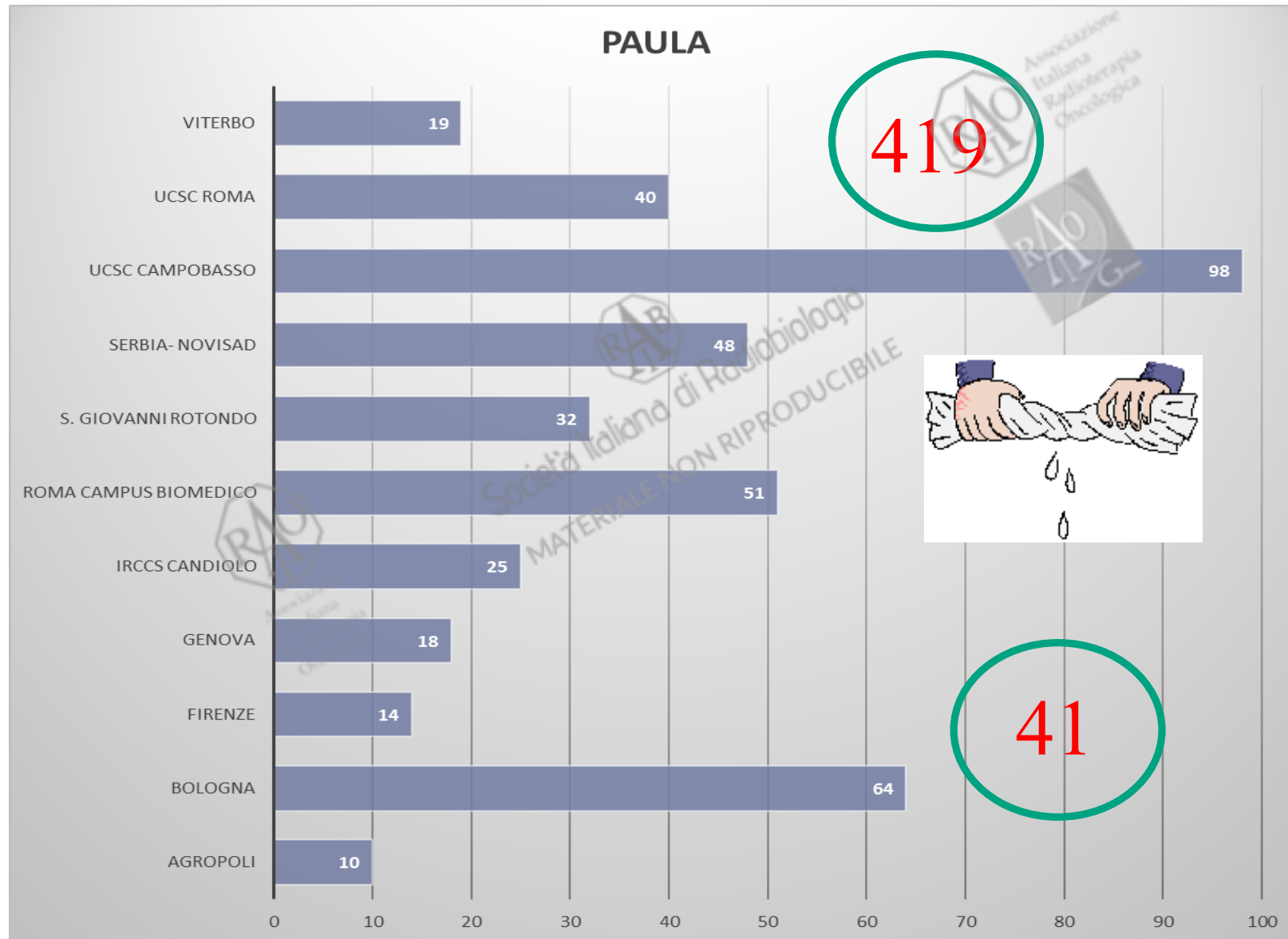
AIRO GASTROINTESTINAL STUDY GROUP

POOLED
NALYSIS
ANRESECTABLE
LOCALLY
UDVANCED

MULTICENTRIC



ACCRUAL



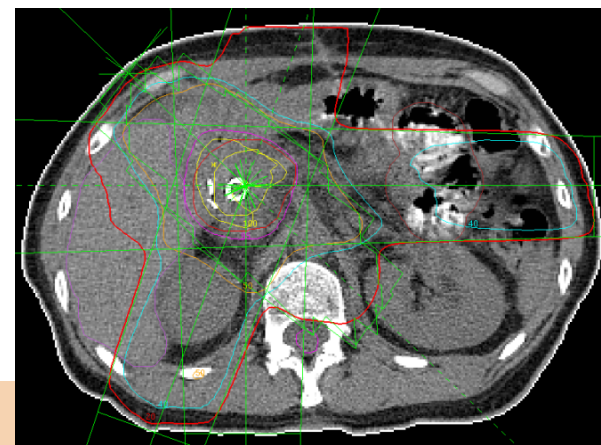
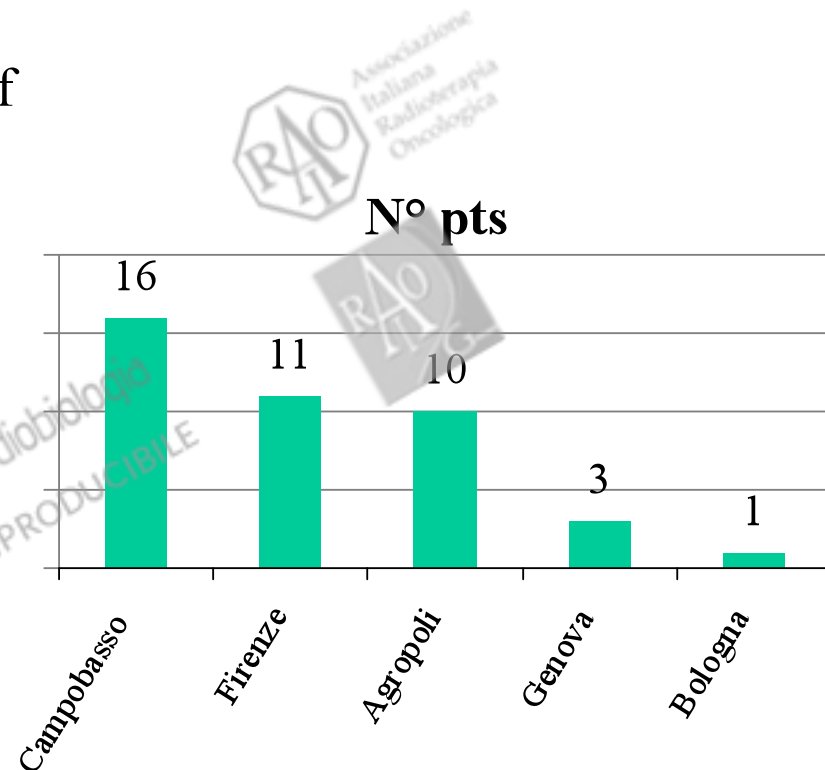
Aim/Methods/Results (1)

We retrospectively review the experience of 5 different centers treating LAPC with SBRT.

41 pts (M/F: 21/20; median age: 71, range: 36-89) with LAPC, undergoing SBRT +/- chemotherapy (CT) with multiagent CT regimens.

Exclusion criteria were metastatic disease and radical surgical treatment. Only palliative surgery was admitted.

Median dose: 25 Gy (range: 4-45) Median fractionation: 6 Gy (range: 4-22)



Results (2)

Gastrointestinal (GI) G1-G2 acute toxicity was 40% (CTCAE.4 scale).

1 patient with G3 GI acute toxicity

1 patient with G3 GI late toxicity

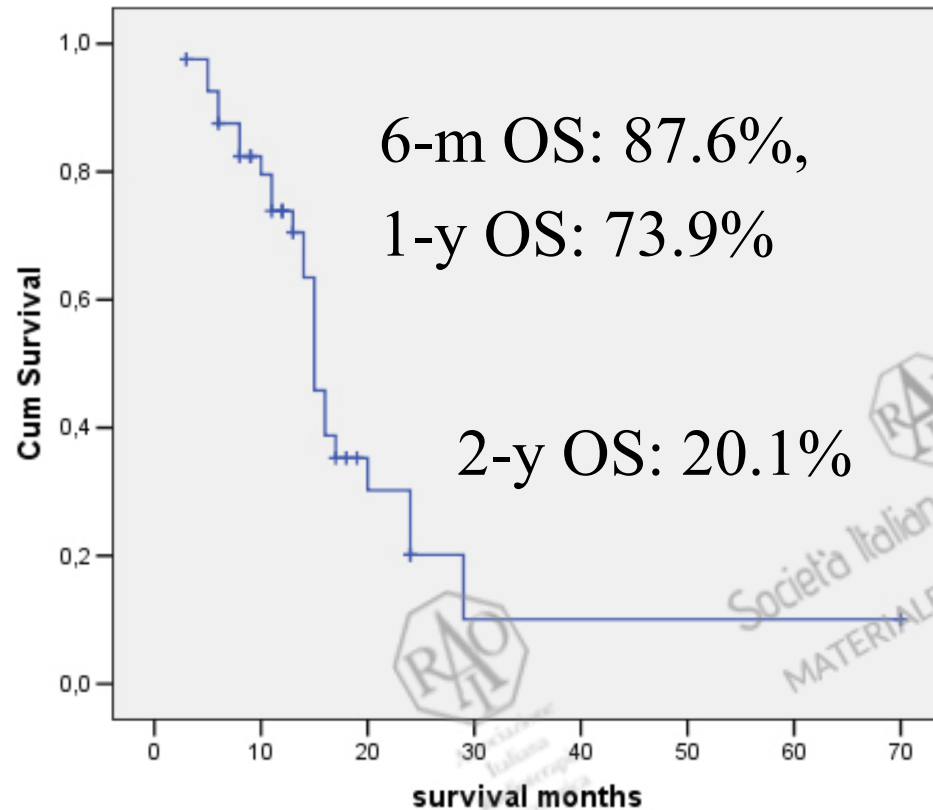


At univariate analysis a better prognosis:

- pts with tumor located at the tail ($p=0.046$),
- histological grade 2 tumor ($p<0.001$),
- adjuvant chemotherapy ($p=0.036$).

Results (3)

Overall survival



Median OS: 15 m (range 13.5-16.4)

Improved OS

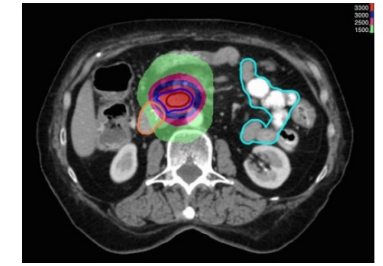
cT3 tumor stage (p=0.085)

biliary stent (p=0.066)

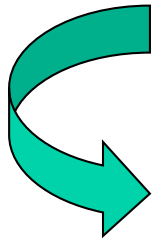
Nodal stage was not significantly related to OS



Conclusions



Fractionated SBRT +/- CT results in tolerable acute and minimal late GI toxicity and warrants OS comparable to current standard treatment (RCT).



Neoadjuvant Stereotactic Radiation Therapy plus Induction Chemotherapy for Unresectable Pancreatic Tumors (**IRENE-1**: Improving REsectability in pancreatic NEoplasms)

- unresectable pancreatic adenoca
- chemotherapy: > 4 cycles
- stereotactic RT: 5 x 6 Gy, between courses 1 & 2
- after 4 weeks → restaging → surgery
- pending approval by Bologna Univ. EC