



XXI° CONGRESSO NAZIONALE AIRO
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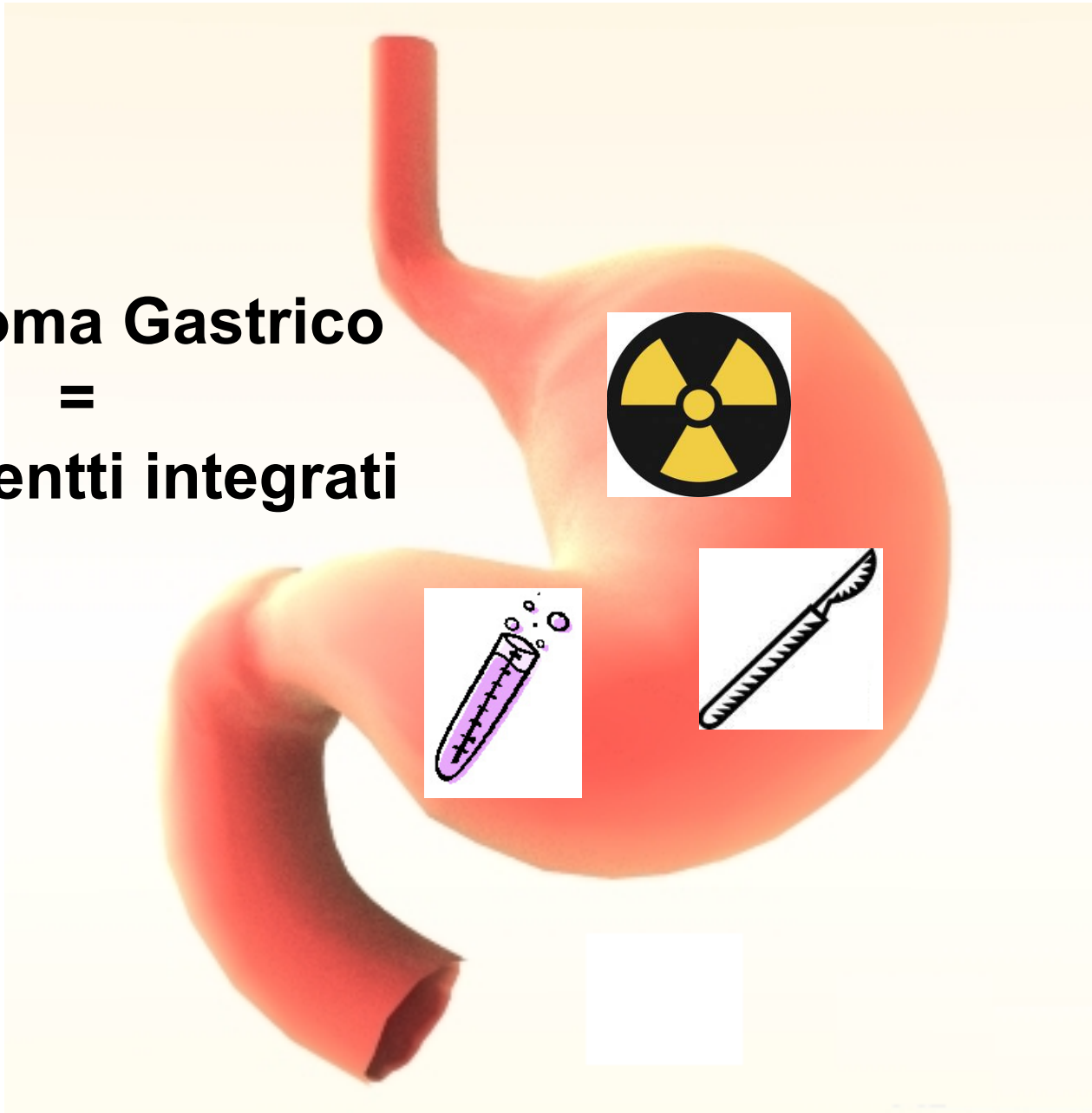
“La tossicità del trattamento integrato”

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Carcinoma Gastrico
=
Trattamenti integrati



Author	Year	Pts	Relapse (%)	Locoregional Relapse (%) Remnant Stomach Duodenal Stump Regional Nodes	Sistemic Relapse (%)		
					Peritoneal	Hematogenous	Lymphatic
Yoo Median F-up 68 months	2000	2328	45.7	19.3	33.9	26.2	4.3
Maehara Median F-up 24.3 months	2000	939	62.8	17.5	34.0	44.3	4.1
Cordiano Median F-up 42 months	2002	412	50.2	38.5	30.5	30.9	-
Ohno Median F-up 17.2 months	2003	709	18.5	5.8	44.2	30.8	19.2
Wu Median F-up 76.8 months	2003	631	40.1	26.0	38.2	26.8	8.9

Carcinoma Gastrico
=
Trattamenti integrati

Polichemioterapia



Grandi volumi



D2

> TOSSICITA'

TABLE 2. REASONS FOR THE CESSATION OF CHEMORADIOTHERAPY AMONG THE 281 PATIENTS IN THE CHEMORADIOTHERAPY GROUP.

REASON FOR CESSATION	NO. OF PATIENTS (%)
Protocol treatment completed	181 (64)
Toxic effects	49 (17)
Patient declined further treatment	23 (8)
Progression of disease	13 (5)
Death	3 (1)
Other	12 (4)

TABLE 3. MAJOR TOXIC EFFECTS OF CHEMORADIOTHERAPY.*

TYPE OF TOXIC EFFECT	NO. OF PATIENTS (%)
Hematologic	148 (54)
Gastrointestinal	89 (33)
Influenza-like	25 (9)
Infection	16 (6)
Neurologic	12 (4)
Cardiovascular	11 (4)
Pain	9 (3)
Metabolic	5 (2)
Hepatic	4 (1)
Lung-related	3 (1)
Death†	3 (1)

Phase II Trial of Preoperative Chemoradiation in Patients With Localized Gastric Adenocarcinoma (RTOG 9904): Quality of Combined Modality Therapy and Pathologic Response

Jaffer A. Ajani, Kathryn Winter, Gordon S. Okawara, John H. Donohue, Peter W.T. Pisters, Christopher H. Crane, John F. Greskovich, P. Rani Anne, Jeffrey D. Bradley, Christopher Willett, and Tyvin A. Rich

(2 x PF + RT- FTx + Chirurgia)

Table 2. Selected Chemotherapy and Acute Radiotherapy Toxicities (n = 43)

Toxicity	Grade			
	1	2	3	4
Blood/bone marrow				
Hemoglobin decreased	21	11	1	0
Neutropenia	7	3	6	0
Platelet count decreased	5	0	3	0
Cardiovascular (general)				
Tossicità 4 Grado 21%				
Diarrhea	8	5	5	1
Esophagitis	7	5	2	0
Gastritis	0	4	1	0
Nausea	6	24	7	0
Stomatitis	12	4	4	0
Vomiting	3	17	6	1
Febrile neutropenia	0	0	1	0
Neurology				
Peripheral sensory neuropathy	5	2	0	0
Pulmonary				
Dyspnea	1	4	0	0
Renal				
Blood creatinine increased	2	1	0	0



Original article

Survival after radiotherapy in gastric cancer: Systematic review and meta-analysis of published literature

Vincenzo Valentini^{a,*}, Francesco Cellini^b, Bruce D. Minsky^c, Gian Carlo Mattiucci^a, Mario Balducci^a, Giuseppe D'Agostino^a, Elisa D'Angelo^d, Nicola Dinapoli^a, Nicola Nicolotti^e, Chiara Valentini^a, Giuseppe La Torre^f

20 Studi Clinici Randomizzati 2025 pazienti

RT (pre, post-operatoria, IORT) vs Chirurgia o Chirurgia + Chemioterapia

RT = ↑ TOSSICITA'

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Abstract:

Background: Following curative resection of gastric or GEJ adenocarcinoma, INT-0116 demonstrated superior survival for pts who received postoperative bolus 5-FU and leucovorin (LV) before and after concomitant 5-FU and RT compared to surgery alone. We assessed whether a postoperative chemoRT regimen that replaces 5-FU/LV with a potentially more active systemic therapy (ECF) improves overall survival (OS). **Methods:** Patients with resected gastric or GEJ

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FU-LV +RT (5-FU c.i.)
VS
ECFx1 + RT (5-FU c.i.) + ECFx2

2°-3° ECF dose ridotta



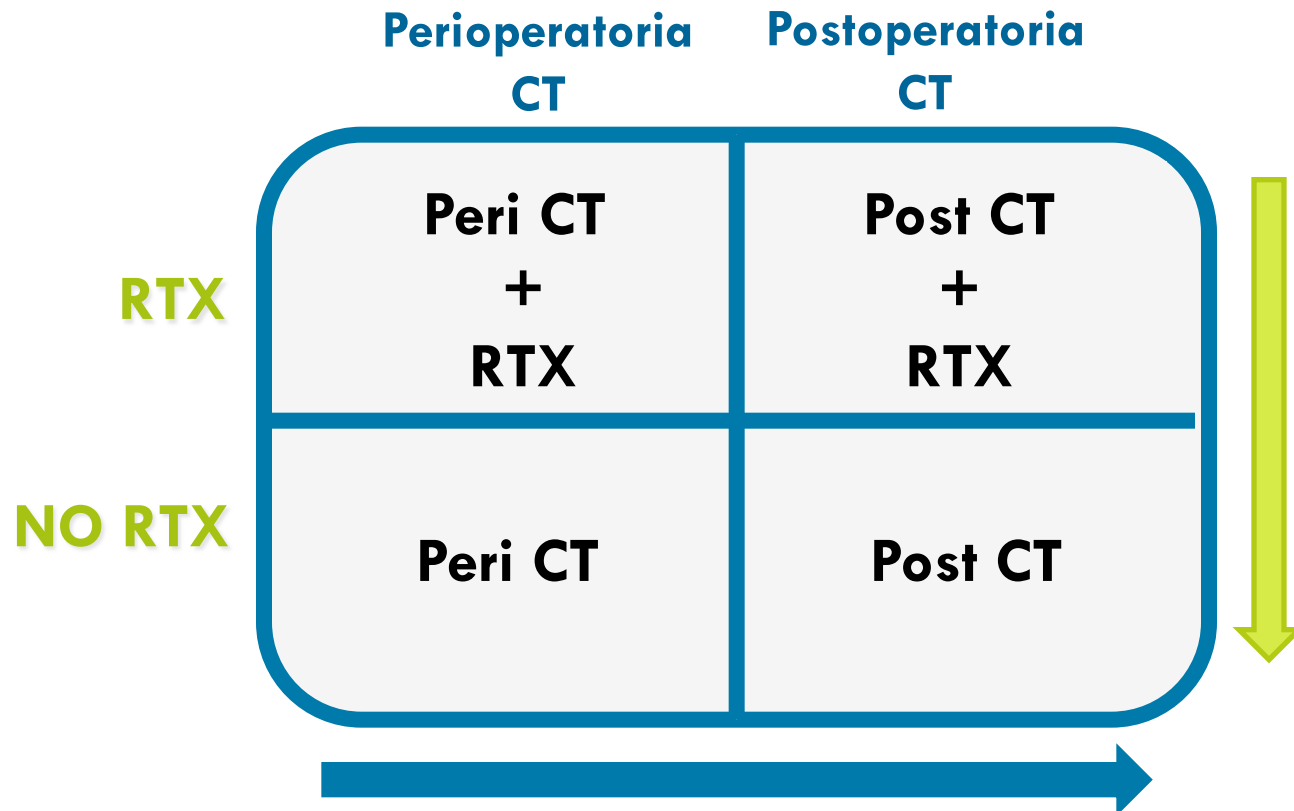
Randomizzazione

ITACA-S 2

adenocarcinoma
dello stomaco considerato
operabile

I pazienti saranno stratificati
per centro, stadio di malattia,
performance status

RANDOM INDIPENDENTI
2a RANDOM non obbligatoria



DISEGNO DELLO STUDIO

1. CHT peri-operatoria o CHT post-operatoria

2. RTX post-operatoria o nessun trattamento radioterapico

CHT a scelta tra:

EOX

E: epirubicina 50 mg/m² IV (bolus), die 1
O: oxaliplatino 130 mg/m², (2-3 ore i. e.), die 1
X: capecitabina 625 mg/m² somministrazione continua po, die 1-21

ECF

E: epirubicina 50 mg / m² IV (bolus), die 1
C: cisplatino 60 mg / m² in infusione (e.v.) die 1
F: fluorouracile 200 mg / m² somministrazione per infusione continua die 1-21

✓ **RTX**

45 Gy
somministrati in frazione giornaliera di 1.8 Gy, 5 volte a settimana per 6 settimane.

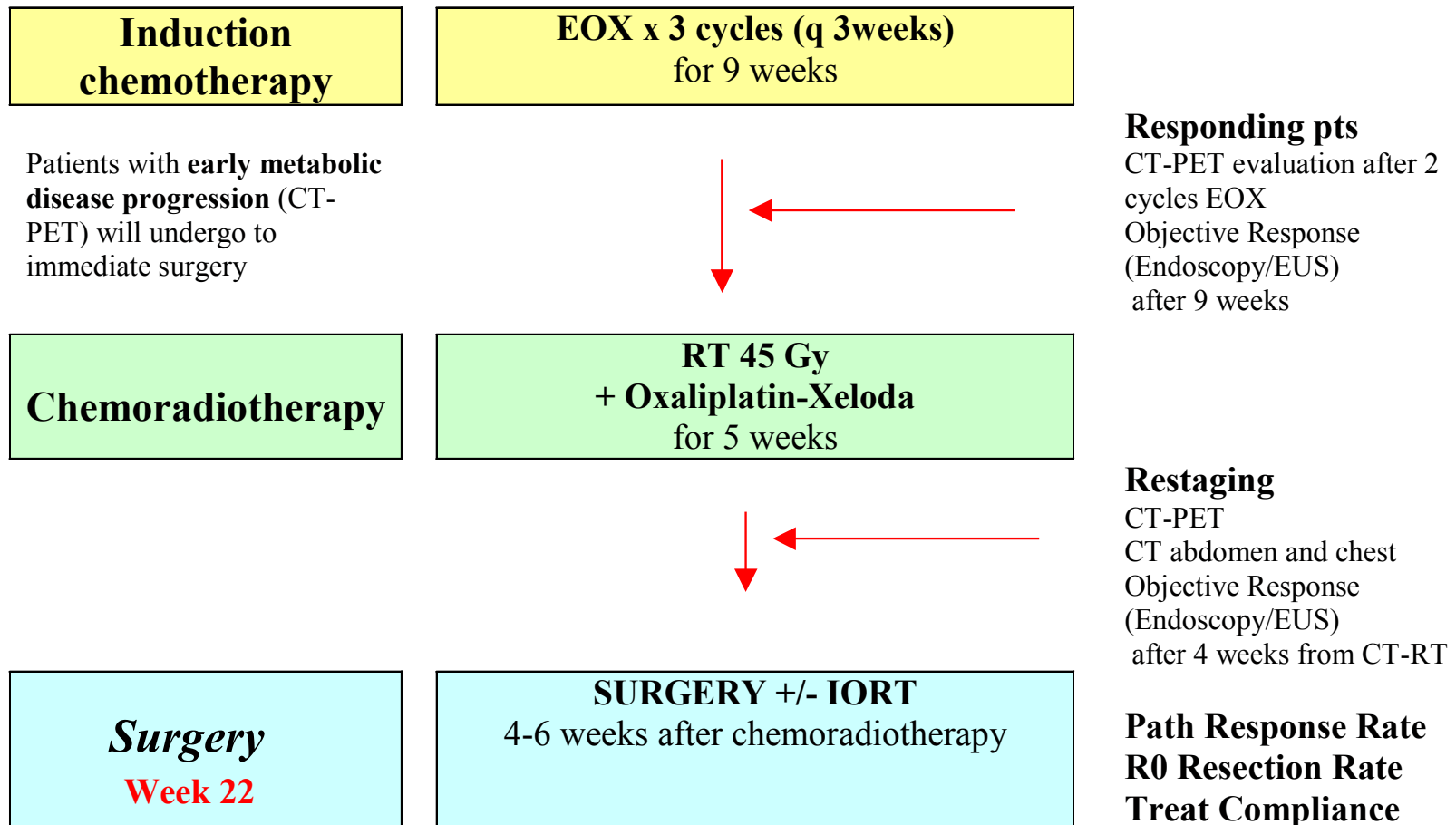
CHT concomitante a scelta tra:

- 5-FU 225 mg / m² somministrato in infusione continua i.v.
- ✓ capecitabina 825 mg / m² somministrata 2 volte die po

TRATTAMENTI

NEOX-RT Study

Patients with locally advanced **uT3-4,N0** or any **uT,N+M0 (LPS)** potentially resectable, locally advanced gastric cancer



Gruppo GI AIRO:

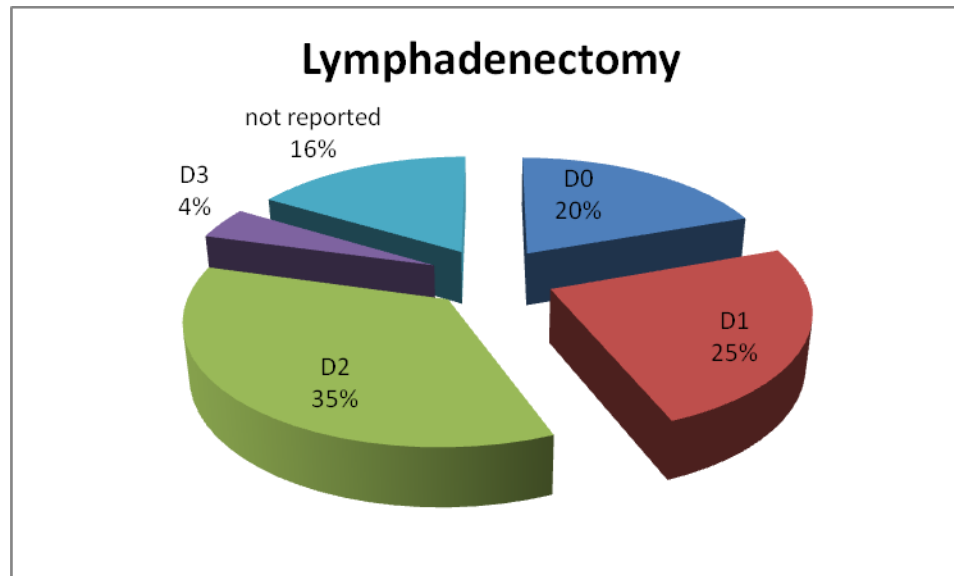
Pooled Analysis RT post-operatoria

Casistica di 17 Centri

348 pazienti (Settembre 2001 Giugno 2008)

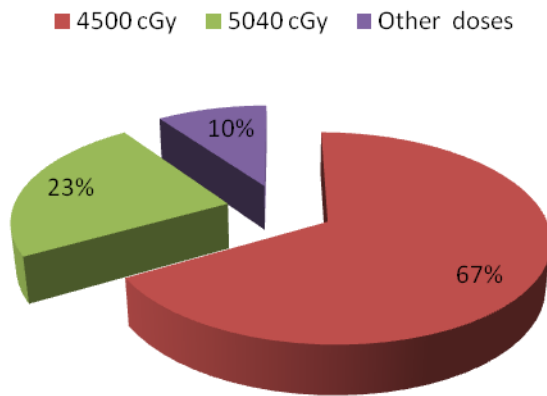
194 (55.7%) G. totali - 154 (44.2%)G. subtotali

R0 280 (80.4%) – R1 53 (15.2%)

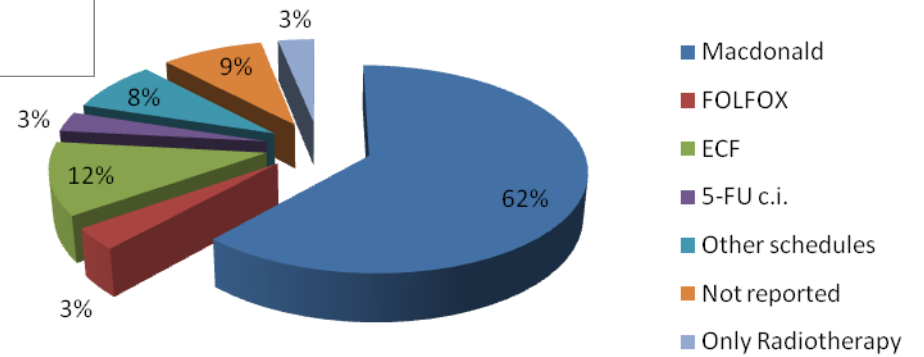


Risultati

Total dose of Radiotherapy

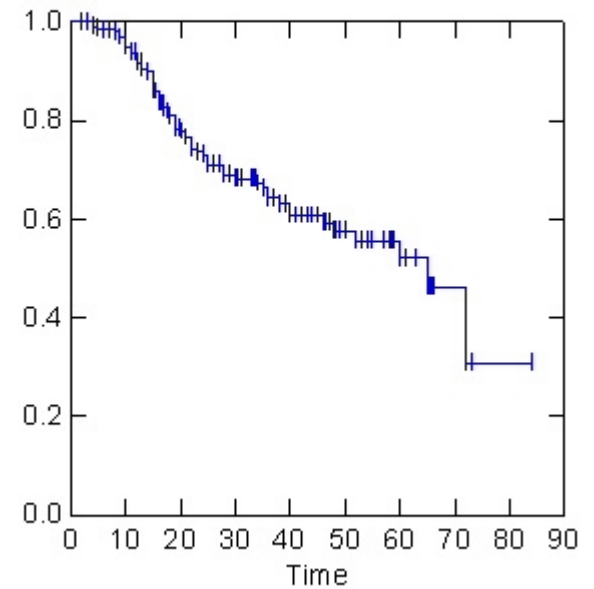


Chemotherapy schedule



FUP mediano 30 mesi	2 anni	3 anni	Mediana
LC	79 %	73 %	n.r.
MFS	74 %	64 %	n.r.
DFS	64 %	53 %	39 mesi
OS	73 %	64 %	60 mesi

Overall Survival



Compliance RT-CT/CT

Completamento Terapia adiuvante 74.13%

Sospensione CT: 23.5%

Sospensione RT-CT: 4.5%

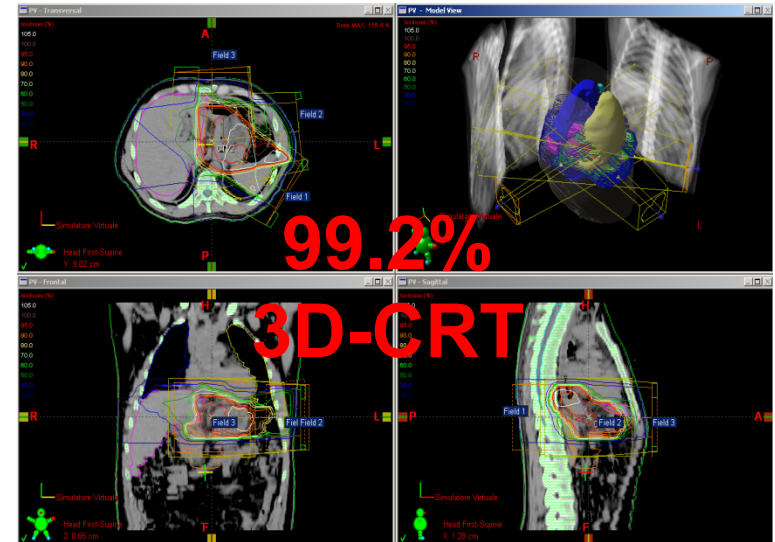
Interruzioni RT <3 gg: 15.8%

Interruzioni RT >3gg: 9.1%

Tossicità acuta >2° RT-CT/CT

Ematologica 9.1% (3.7% RT-CT)

Intestinale 10% (4% RT-CT)



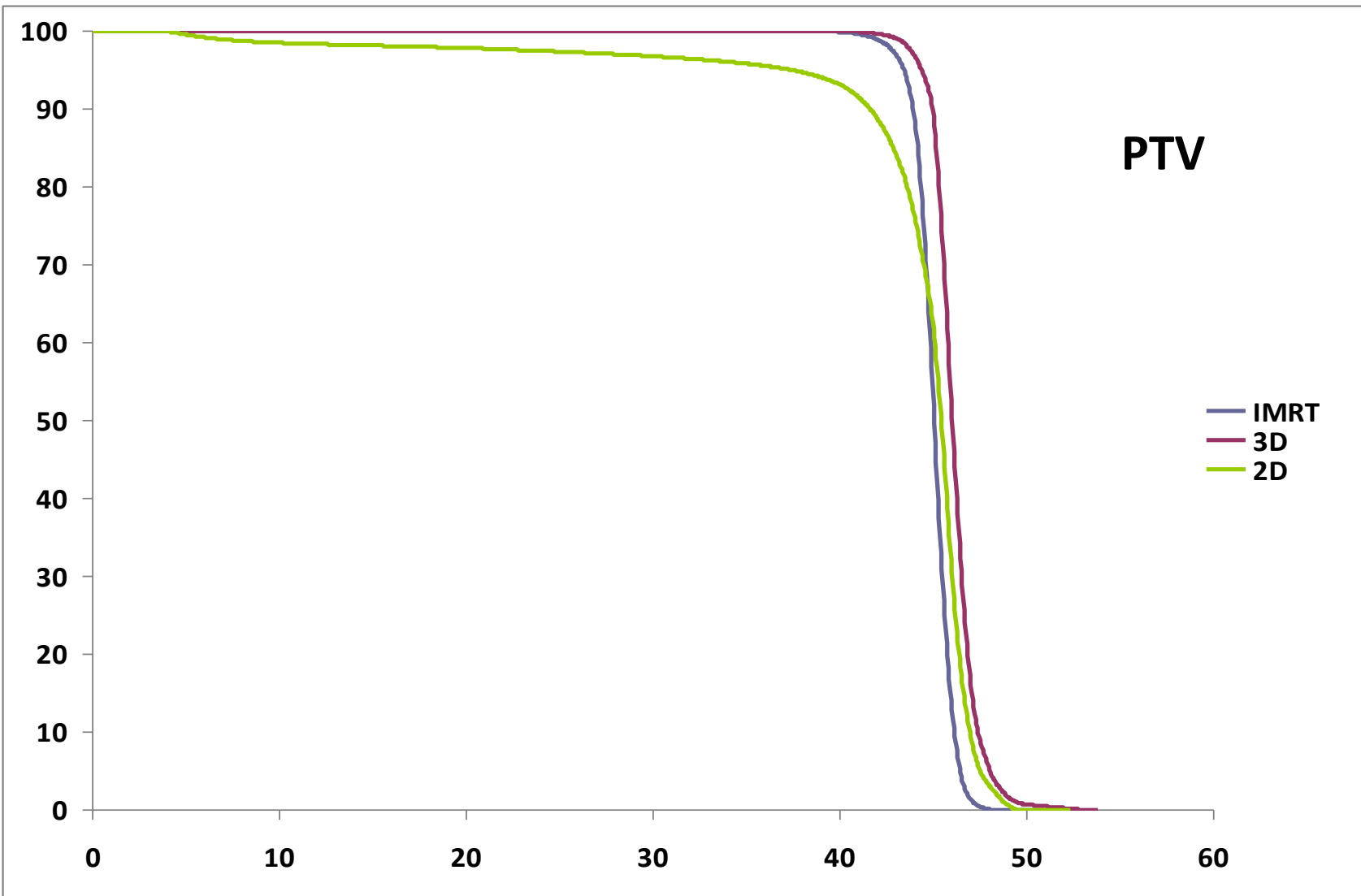
Esperienza UCSC:

Confronto dosimetrico 2D, 3D e IMRT su 30 pazienti

RISULTATI 2D

- Planning 2D inadeguato per insufficiente copertura del target

2D		UPPER	MEDIUM	LOWER
V95 PTV	Media	85,56	85,83	88,85
	DS	8,27	8,25	5,42
UDV 95	Media	56,69	70,59	92,37
	DS	30,06	52,85	54,00
D MEAN RENI	Media	18,06	18,44	16,96
	DS	7,46	6,88	7,99
D MAX MIDOLLO	Media	50,15	50,33	51,01
	DS	1,28	1,31	2,42
D MEAN FEGATO	Media	17,80	17,77	17,81
	DS	2,83	2,98	3,64
V 15 INTEST	Media	80,46	105,87	87,82
	DS	124,98	154,66	64,63



PTV

- IMRT
- 3D
- 2D

RISULTATI 3D E IMRT

		UPPER			MEDIUM			LOWER		
		3D	IMRT	3D/IMRT	3D	IMRT	3D/IMRT	3D	IMRT	3D/IMRT
V95 PTV	Media	99,28	97,70	<0,01	99,12	98,09	0,07	98,45	97,20	0,15
	DS	0,94	1,39		0,87	1,45		1,14	2,37	
UDV 95	Media	3,51	9,22	0,03	4,72	8,95	0,15	12,53	22,73	0,20
	DS	4,80	5,74		5,33	7,05		9,57	22,19	
D MEAN RENI	Media	13,47	11,67	0,41	14,96	12,74	0,24	16,55	14,73	0,08
	DS	6,25	2,50		5,24	2,32		2,49	1,88	
D MAX MIDOLLO	Media	17,02	26,92	<0,01	22,13	25,91	0,29	22,58	28,39	0,07
	DS	6,98	3,59		9,33	5,89		9,04	2,55	
D MEAN FEGATO	Media	24,97	18,96	<0,01	25,85	19,95	<0,01	27,68	18,36	<0,01
	DS	3,34	1,47		4,21	2,26		3,19	3,17	
V 15 INTEST	Media	99,11	57,56	0,38	137,35	89,00	0,42	228,27	145,24	0,18
	DS	127,41	69,85		152,64	107,51		150,06	111,80	

Malnutrizione

- 85% dei pazienti affetti da neoplasie gastroenteriche manifesta calo ponderale
- Nel 30% dei pazienti la perdita di peso è $> 30\%$
- Nel 30% dei pazienti operati la malnutrizione condiziona il trattamento adiuvante (aumento della tossicità fino al decesso)

Conclusioni:

Come contenere la tossicità nei trattamenti integrati del Carcinoma Gastrico?

Intervenire su: **Volumi**

Tecnica di RT

Malnutrizione