

# NEN PRECEPTORSHIP

## LA PRATICA CLINICA NELLE NEOPLASIE NEUROENDOCRINE

5/6 Aprile 2018 | IEO, Istituto Europeo di Oncologia - Milano

**NEN**  **Preceptorship**

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**Criteria di scelta della terapia non chirurgica**  
**Algoritmo di ragionamento nell'impostazione terapeutica.**  
**Francesca Spada**

# **Caso clinico**

Tumore neuroendocrino del pancreas

# Presentazione clinica

- M, 44 aa
- Ex fumatore (10 sigarette/die)
- **Anamnesi patologica:** nefrolitiasi
- **Familiarità oncologica:**
  - Padre deceduto per neoplasia polmonare (ex fumatore)

**Dicembre 2017:**

Calo ponderale del <10% (in 3 mesi) + dispepsia

**NET ben  
differenziato, Ki-67  
19% (G2 sec. WHO  
2010)**

**SD RECIST in 3 mesi  
(lenta PD)**

**SINTOMATICO**



**PET/TC Ga68 ++-**

**PET/TC FDG +++**

# GEP NEN: eterogeneità dei trattamenti

Ki-67 < 20% o MI < 20 HPF

NET (70-80%)

Ki-67 > 20% o MI > 20 HPF

NEC  
(20-30%)

“Molecular targeted  
agents”

SSA

Chemioterapia  
(alchilanti/fluoropirimi  
dine)

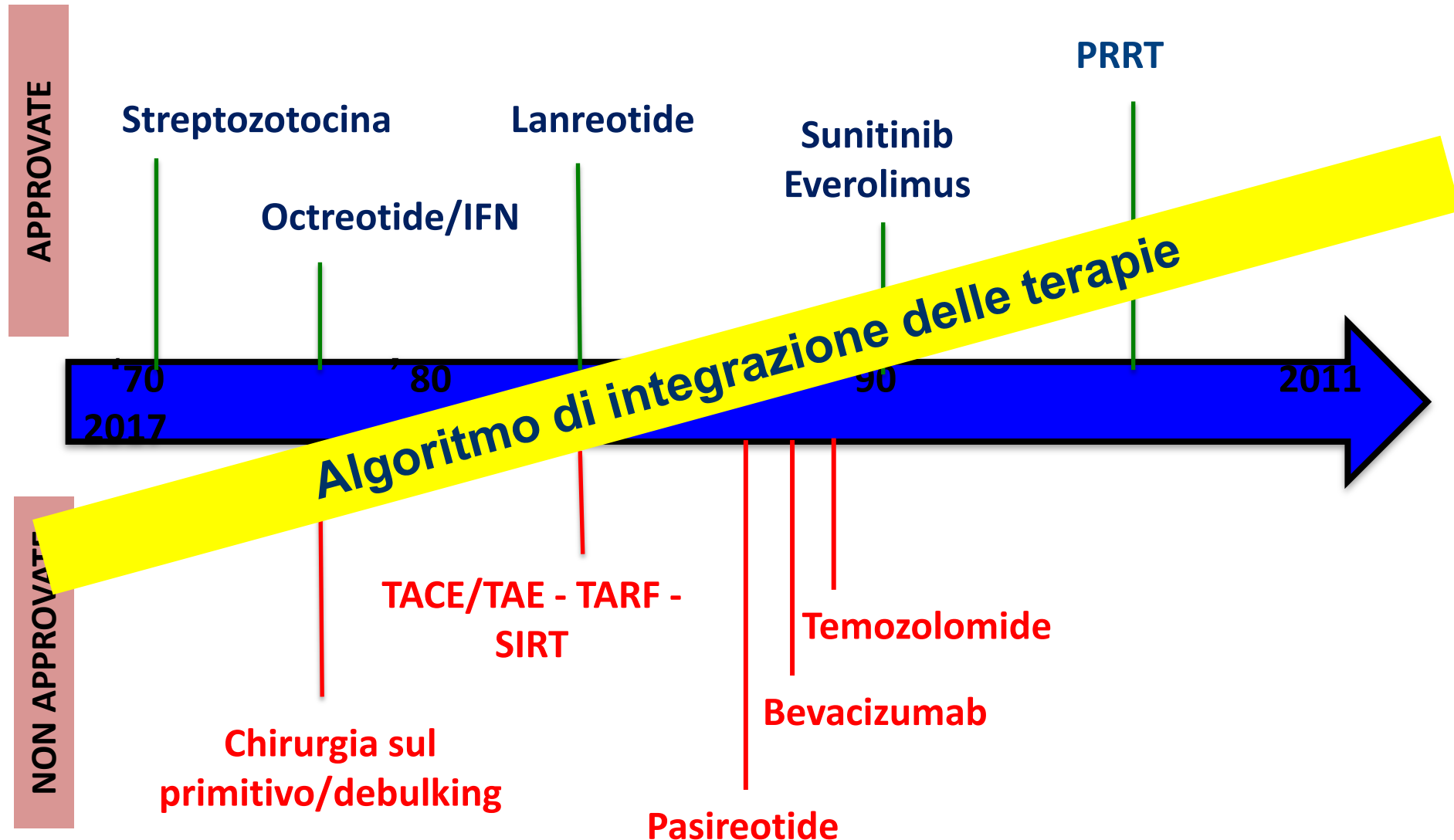
PRRT

Terapie  
locoregionali

“Clinical trials”

Chemioterapia  
 (“platinum-based”)

# Evoluzione delle terapie

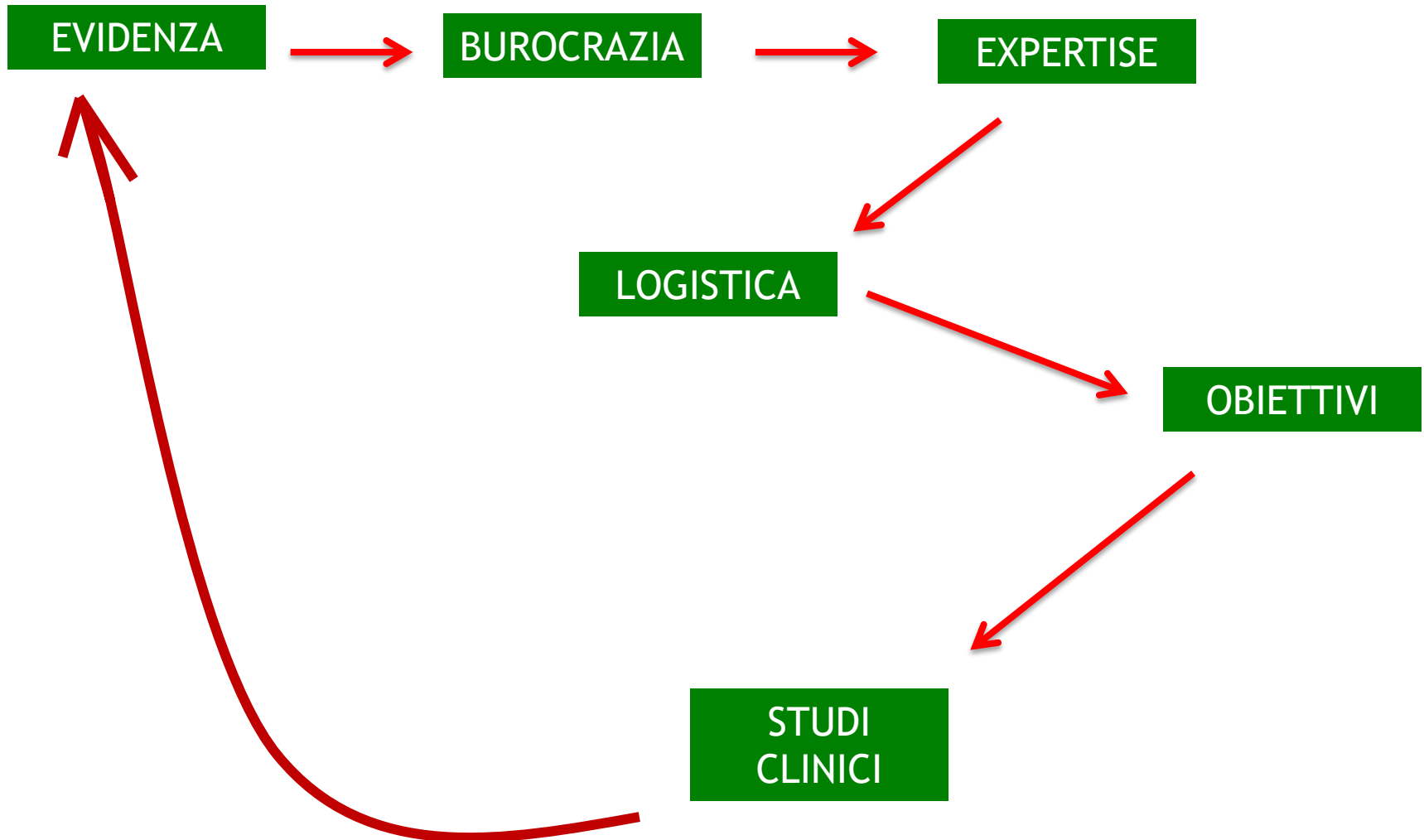


# Evoluzione degli studi clinici

| Primitivo         | Octreotide | Lanreotide | 177-Lu-DOTATATE | STZ/TMZ         | SUN          | EVE       |
|-------------------|------------|------------|-----------------|-----------------|--------------|-----------|
| Stato di malattia | NAIVE      | SD         | PD > 3 anni     | Non specificato | PD > 12 mesi | PS > 6    |
| Polmone           |            |            |                 |                 |              |           |
| Stomaco           |            | CLARINET   |                 |                 |              | RADIANT-4 |
| Pancreas          |            |            |                 |                 | FASE III     | RADIANT-3 |
| Pic               |            |            | NETTER-1        |                 |              | RADIANT-4 |
|                   |            | CLARINET   |                 |                 |              | RADIANT-4 |
| Retto             |            | CLARINET   |                 |                 |              | RADIANT-4 |
| Ignoto            |            |            |                 |                 |              | RADIANT-4 |

**Livello di evidenza e approvazioni in setting differenti per sede del tumore primitivo**

# Criteri per l'integrazione delle terapie



# Evidenza

|                                                | Braccio di trattamento               | Braccio di controllo                 | Popolaz.                  | N. Paz. | 1° linea | SSA Prec. | SSA concomit. | CT Prec. |
|------------------------------------------------|--------------------------------------|--------------------------------------|---------------------------|---------|----------|-----------|---------------|----------|
| <b>CLARINET</b><br>Caplin<br>NEJM<br>2014      | Lanreotid<br>e autogel               | Placebo                              | Entero-<br>Pancreatici NF | 204     | 84 %     | no        | /             | /        |
| <b>RADIANT</b><br>-3<br>Yao NEJM<br>2011       | Everolimus +/-<br>octreotid<br>e LAR | Placebo<br>+/-<br>octreotid<br>e LAR | PanNET                    | 410     | ?        | 49 %      | 40 %          | 50%      |
| <b>A618111</b><br>1<br>Raymond<br>NEJM<br>2014 | Sunitinib                            | Placebo                              | PanNET                    | 171     | ?        | 35%       | 28 %          | 66%      |

# Evidenza

|                                                | Braccio di trattamento               | Braccio di controllo                 | Popolaz.                  | N. Paz. | 1° linea | SSA Prec. | SSA concomit. | Ki67 |
|------------------------------------------------|--------------------------------------|--------------------------------------|---------------------------|---------|----------|-----------|---------------|------|
| <b>CLARINET</b><br>Caplin<br>NEJM<br>2014      | Lanreotid<br>e autogel               | Placebo                              | Entero-<br>Pancreatici NF | 204     | 84 %     | no        | /             | ≤10% |
| <b>RADIANT</b><br>-3<br>Yao NEJM<br>2011       | Everolimus +/-<br>octreotid<br>e LAR | Placebo<br>+/-<br>octreotid<br>e LAR | PanNET                    | 410     | ?        | 49 %      | 40 %          | ?    |
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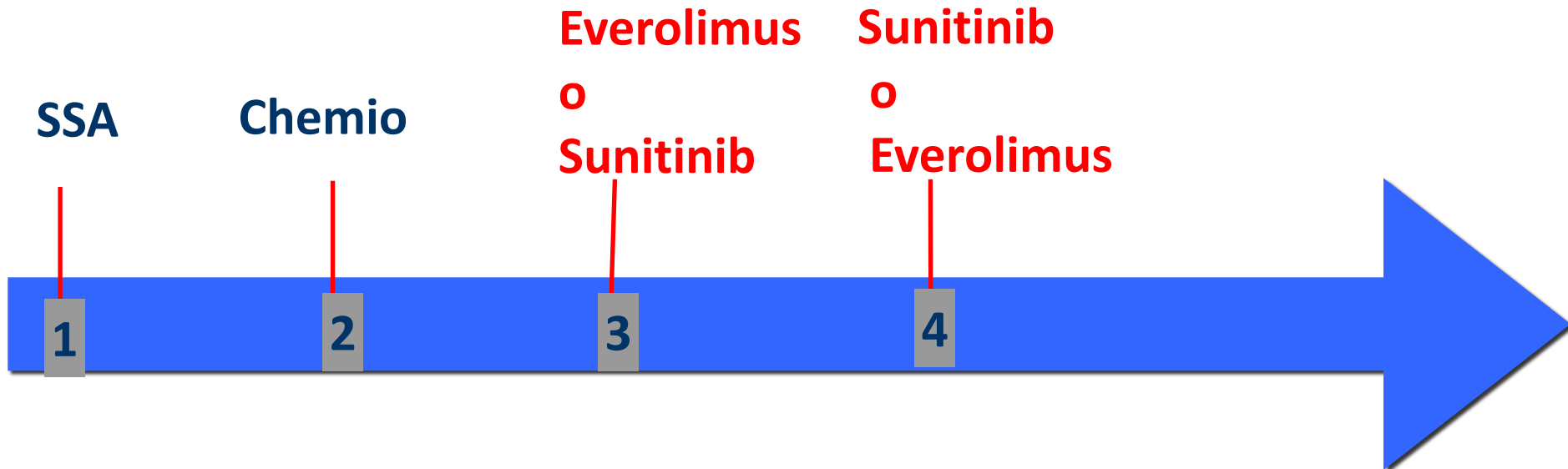
# Linee Guida ed evidenza

## Minimal consensus statement:

Everolimus or sunitinib are generally recommended **after failure of SSA or chemotherapy in pancreatic NET.**

Everolimus and sunitinib ..... can be considered a **first line therapy**, especially if SSA is not an option, and if systemic chemotherapy is not clinically required, not feasible or not tolerated.

# PanNET avanzato in accordo alle LG



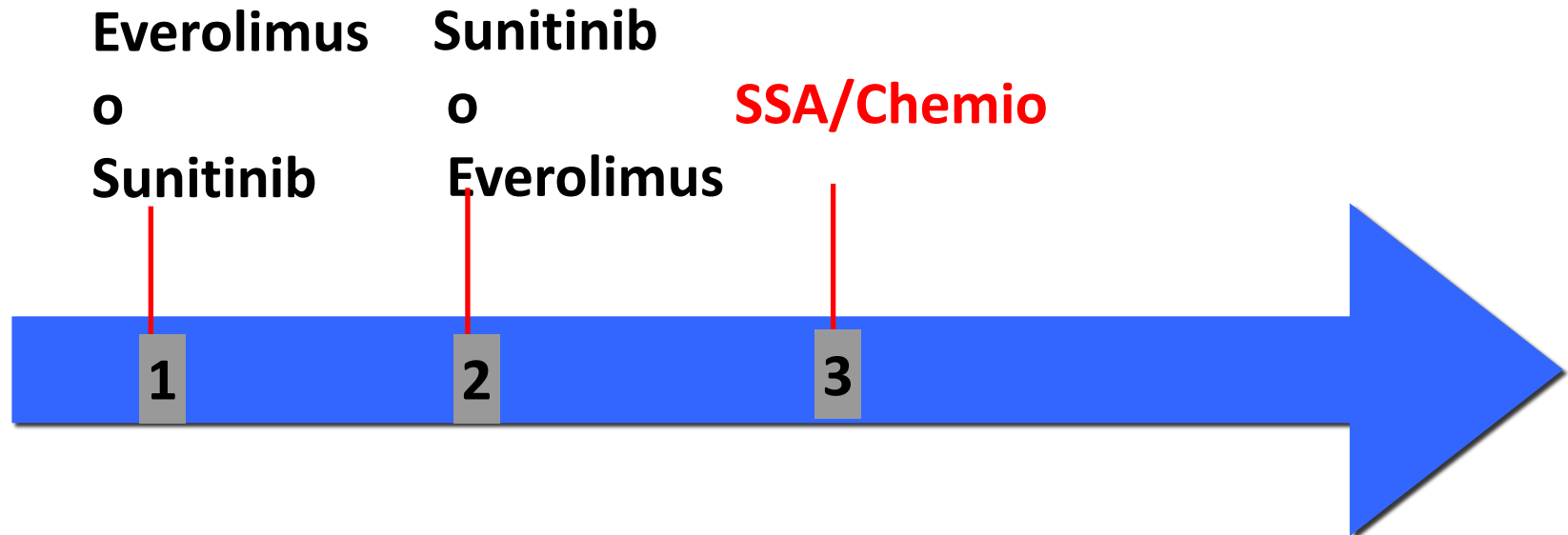
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**PD CLINICA**



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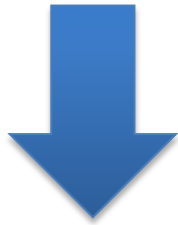
**PET/TC FDG +++**

**Table 2. Objective Tumor Response.\***

| Response Category           | <sup>77</sup> Lu-Dotatate Group<br>(N=101) | Control Group<br>(N=100) | P Value† |
|-----------------------------|--------------------------------------------|--------------------------|----------|
| Complete response — no. (%) | 1 (1)                                      | 0                        |          |
| Partial response — no. (%)  | 17 (17)                                    | 3 (3)                    |          |
| Objective response          |                                            |                          |          |
| No. with response           | 18                                         | 3                        |          |
| Rate — % (95% CI)           | 18 (10–25)                                 | 3 (0–6)                  | <0.001   |

# Obiettivi della terapia

**Immediati**



**Controllo dei  
sintomi**

**Tardivi**



**Controllo della  
progressione nel  
tempo**

**Terapie citoriduttive?**

# Terapie citoriduttive

| Farmaci        | N paz. | Ki67 | SSTR+ | PR   | TTP/PFS   | Tipo studio | Autore         |
|----------------|--------|------|-------|------|-----------|-------------|----------------|
| STZ/ADM/FU     | 84     | ?    | ?     | 34 % | 9 m       | Retrosp.    | Kouvaraki 2004 |
| TMZ            | 36     | ?    | ?     | 14 % | 7 m       | Retrosp     | Ekeblad 2007   |
| XELOX          | 11     | ?    | ?     | 27 % | 20 m      | Phase II    | Bajetta 2007   |
| STZ/DDP/FU     | 49     | 25   | 39    | 38 % | 9 m       | Retrosp.    | Turner 2010    |
| CAP/TEM        | 30     | ?    | ?     | 70 % | 18 m      | Retrosp.    | Strosberg 2011 |
| PRRT 177Lu     | 91     | ?    | 91    | 42 % | 33 m(tot) | Retrosp.    | Kweekk. 2008   |
| Sunitinib/Pl.  | 86     | 36   | ?     | 7 %  | 11.4 m    | Phase III   | Reymond,2011   |
|                | 85     | 36   |       | 0 %  | 5.5 m     |             |                |
| Everolimus/Pl. | 207    | ?    | ?     | 5 %  | 11 m      | Phase III   | Yao 2011       |
|                | 203    |      |       | 2%   | 4.6 m     |             |                |

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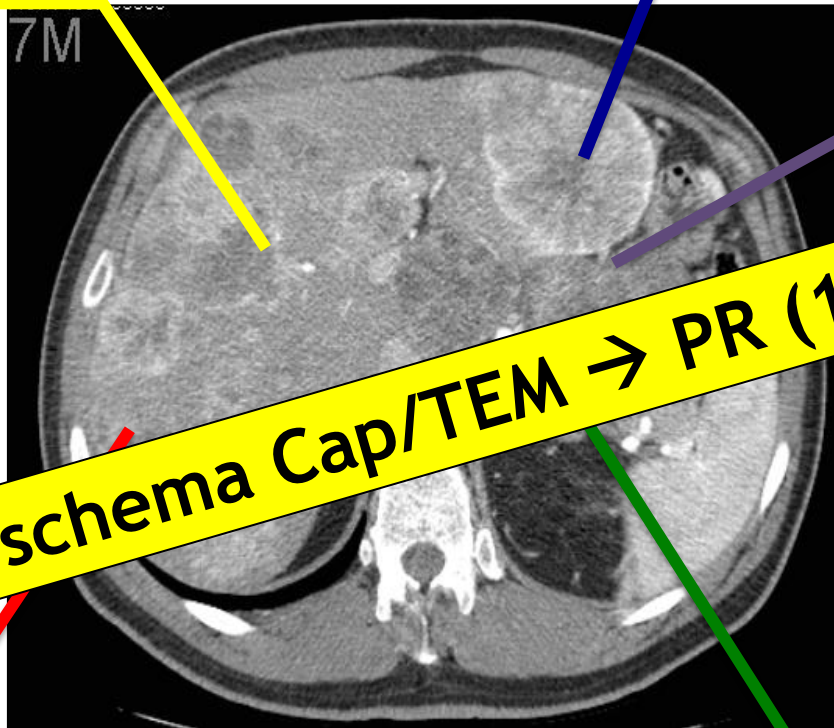
**SD RECIST in 3 mesi  
(lenta PD)**

**PD CLINICA**

**Chemio schema Cap/TEM → PR (18 mesi)**

**PET/TC Ga68 ++-**

**PET/TC FDG +++**



**Controllo della progressione nel  
tempo**



**Controllo della tossicità nel tempo**

# Clinica: tossicità

## Real-World Study of Everolimus in Advanced Progressive Neuroendocrine Tumors

**Table 3.** Predictors for severe toxicity during everolimus treatment

| Variable                                          | HR    | 95% CI     | p value |
|---------------------------------------------------|-------|------------|---------|
| Univariate analysis                               |       |            |         |
| Age <sup>a</sup>                                  | 0.99  | 0.97–1.02  | .748    |
| Performance status (1/2 vs. 0)                    | 1.33  | 0.72–2.44  | .353    |
| pNETs vs non-pNETs                                | 0.97  | 0.53–1.79  | .943    |
| Previous treatment                                |       |            |         |
| Somatostatin analogs                              | 0.84  | 0.26–2.74  | .781    |
| Chemotherapy                                      | 3.68  | 1.94–6.97  | <.0001  |
| PRRT                                              | 2.58  | 1.38–4.81  | .002    |
| Chemotherapy and PRRT                             | 12.61 | 4.60–34.53 | <.0001  |
| Time from initial diagnosis (months) <sup>a</sup> | 1.00  | 1.00–1.01  | .026    |

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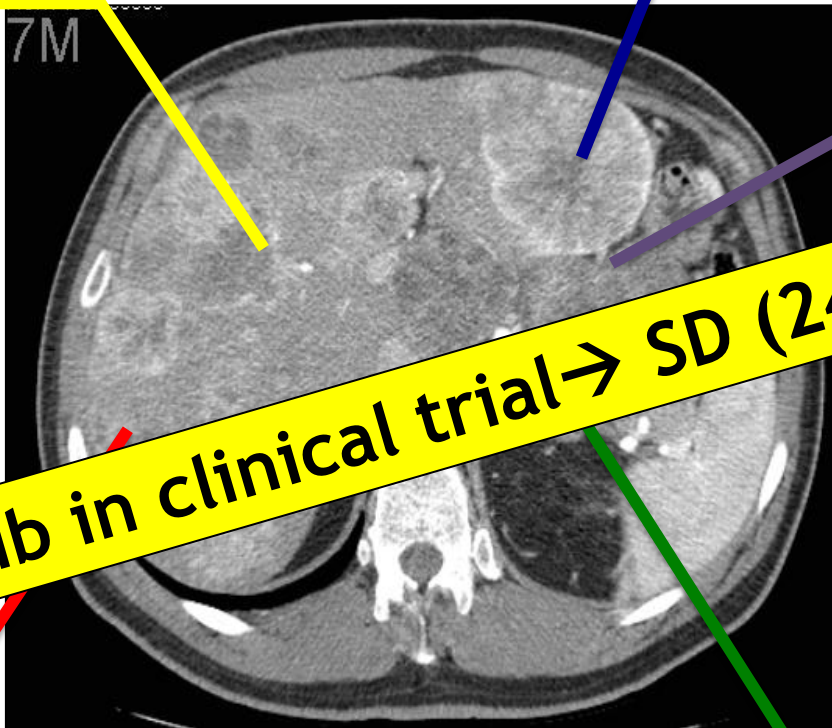
**SD RECIST in 18 mesi  
(lenta PD)**

**Asintomatico**

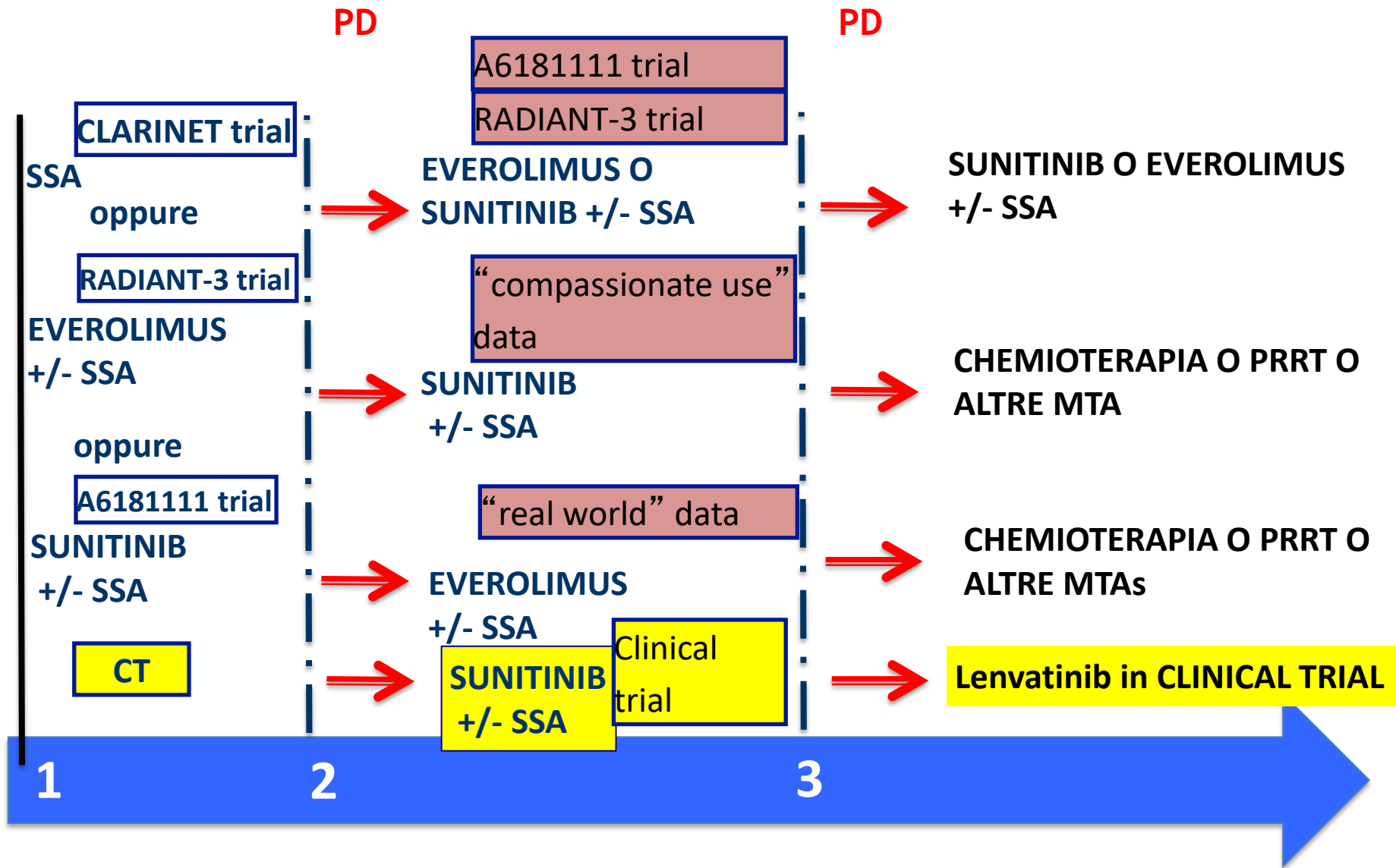
**Sunitinib in clinical trial → SD (24 mesi)**

**PET/TC Ga68 ++-**

**PET/TC FDG +++**



# PanNETs: pratica clinica



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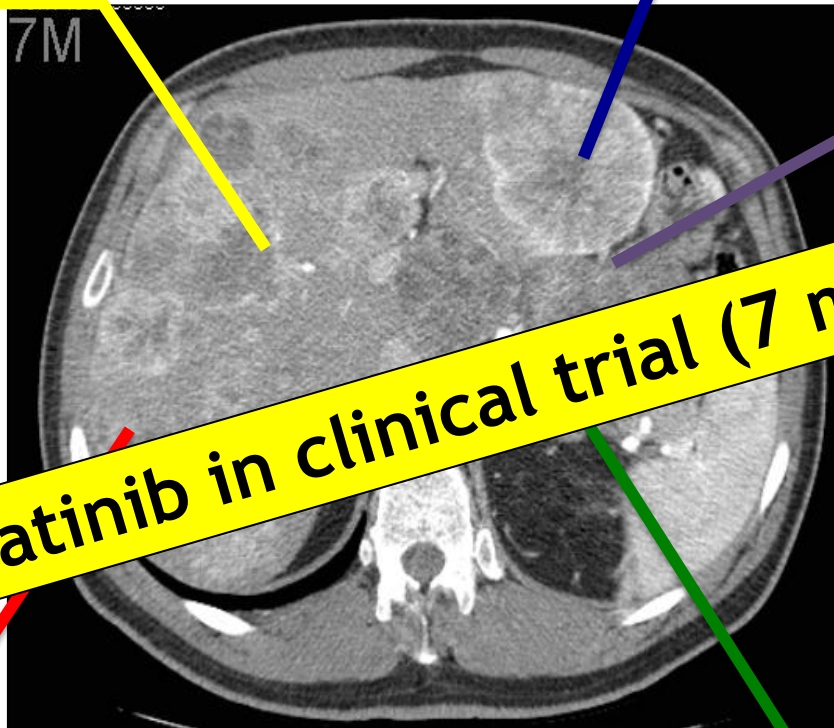
**SD RECIST in 3 mesi  
(lenta PD)**

**asintomatico**

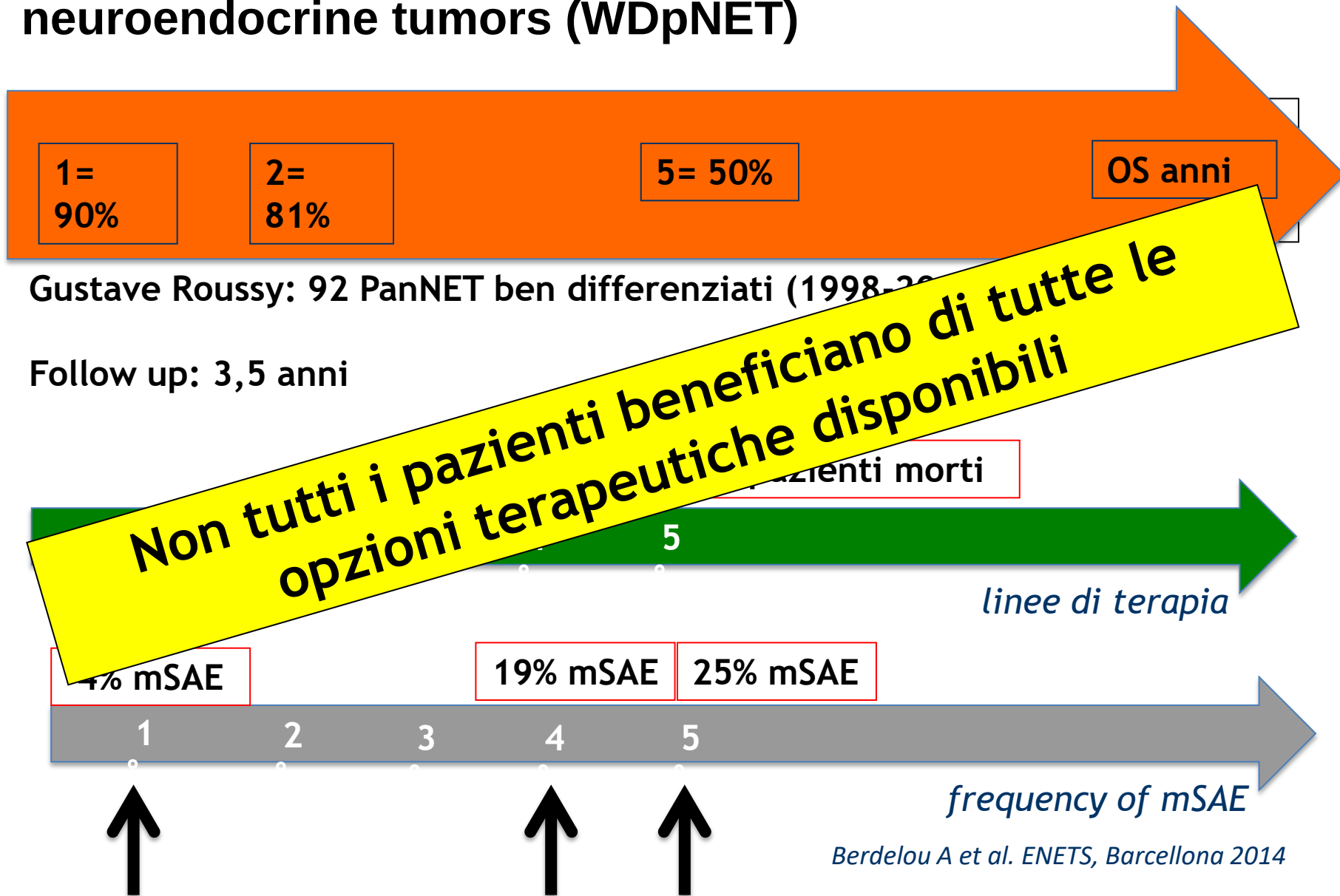
**Lenvatinib in clinical trial (7 mesi)**

**PET/TC Ga68 ++-**

**PET/TC FDG +++**



# (M1) Overall survival (OS) as a function of the number of therapeutic lines in patients with well-differentiated neuroendocrine tumors (WDpNET)



# Take home message

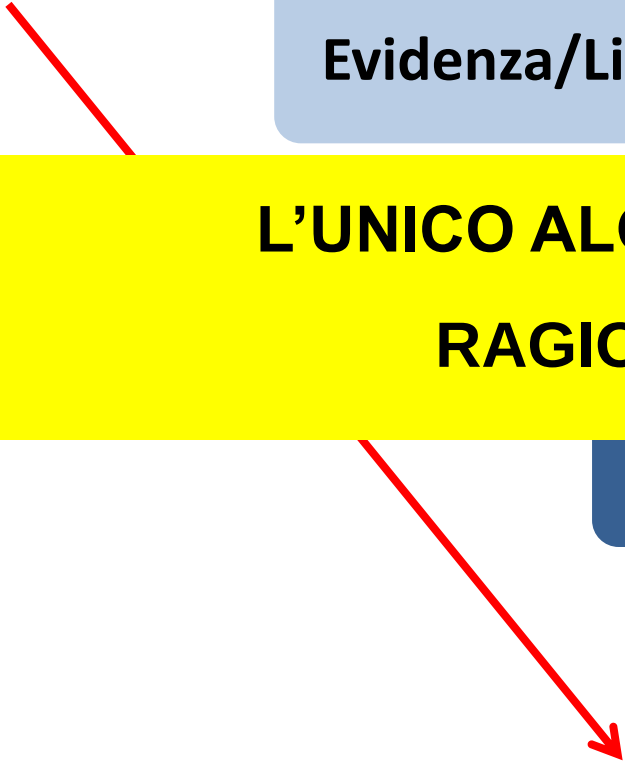
**Caratteristiche  
paziente/tumore**

**Evidenza/Linee Guida**

**L'UNICO ALGORITMO POSSIBILE E' IL  
RAGIONAMENTO CLINICO**

**Pratica clinica**

**Obiettivi terapia**



## Gruppo Multidisciplinare NET IEO - Centro di Eccellenza ENETS



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