

SACRO CUORE
DON CALABRIA



La gestione del Paziente con nodulo polmonare
Giovanni Foti
Negrar 11 Novembre 2022



Nodulo polmonare

- Lesione nodulare con dimensioni comprese tra pochi mm e svariati cm
- La maggior parte dei noduli è benigna
- Soprattutto i noduli in pazienti asintomatici con dimensioni < 5 mm
- La prognosi è buona per lesioni piccole con diagnosi precoce
- La maggior parte delle lesioni risulta di riscontro incidentale all'imaging



Nodulo polmonare

- Paziente sintomatico (pneumologo)
- Paziente asintomatico (riscontro radiologico incidentale)
- Paziente oncologico (riscontro nel work-up per stadiazione)



Gestione del paziente con Nodulo polmonare incidentale

- Caratteristiche imaging = LUNG RADS
- BASSO SOSPETTO (Piccole dimensioni / benignità) = follow - up
- ALTO SOSPETTO (Grandi dimensioni / aggressività) = visita, approfondimenti diagnostici, biopsia, exeresi chirurgica



National Comprehensive
Cancer Network®

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

Lung Cancer Screening

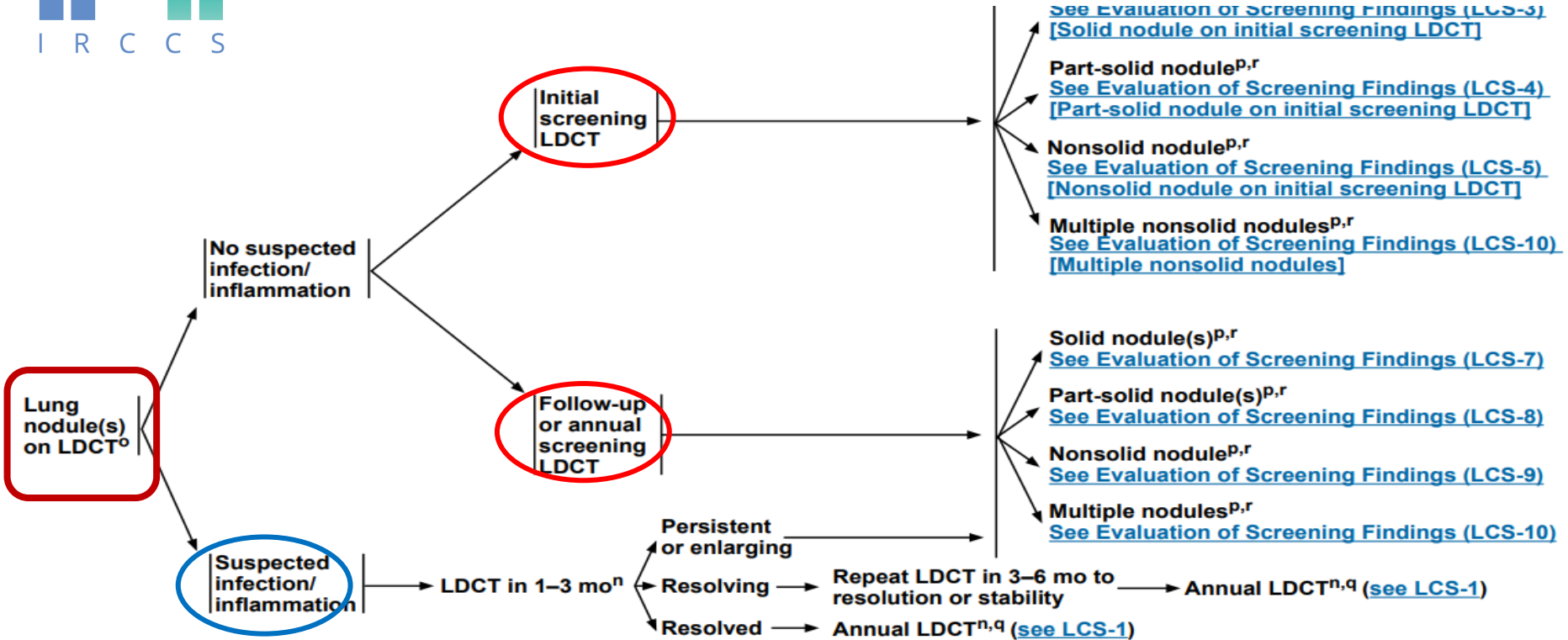
Version 1.2022 — October 26, 2021

NCCN.org

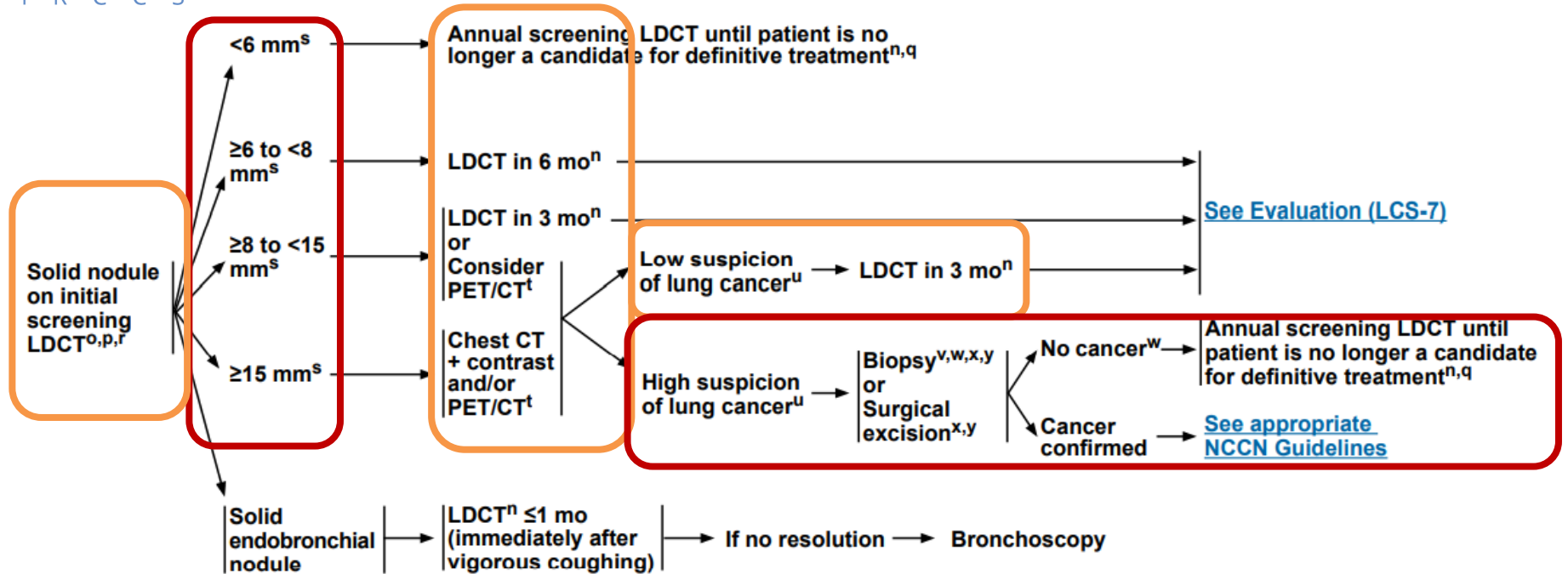
NCCN Guidelines for Patients® available at www.nccn.org/patients



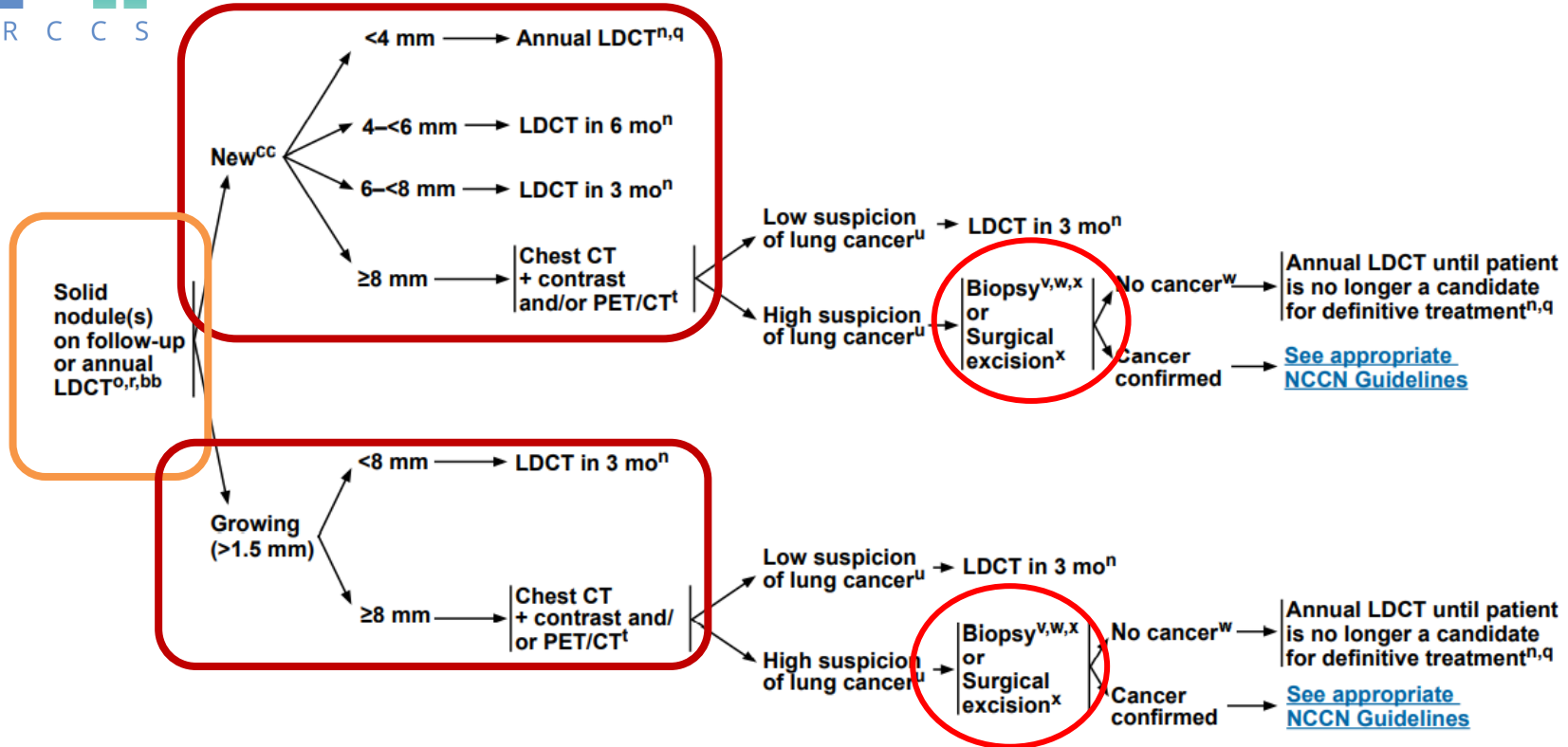
Gestione del paziente con Nodulo polmonare



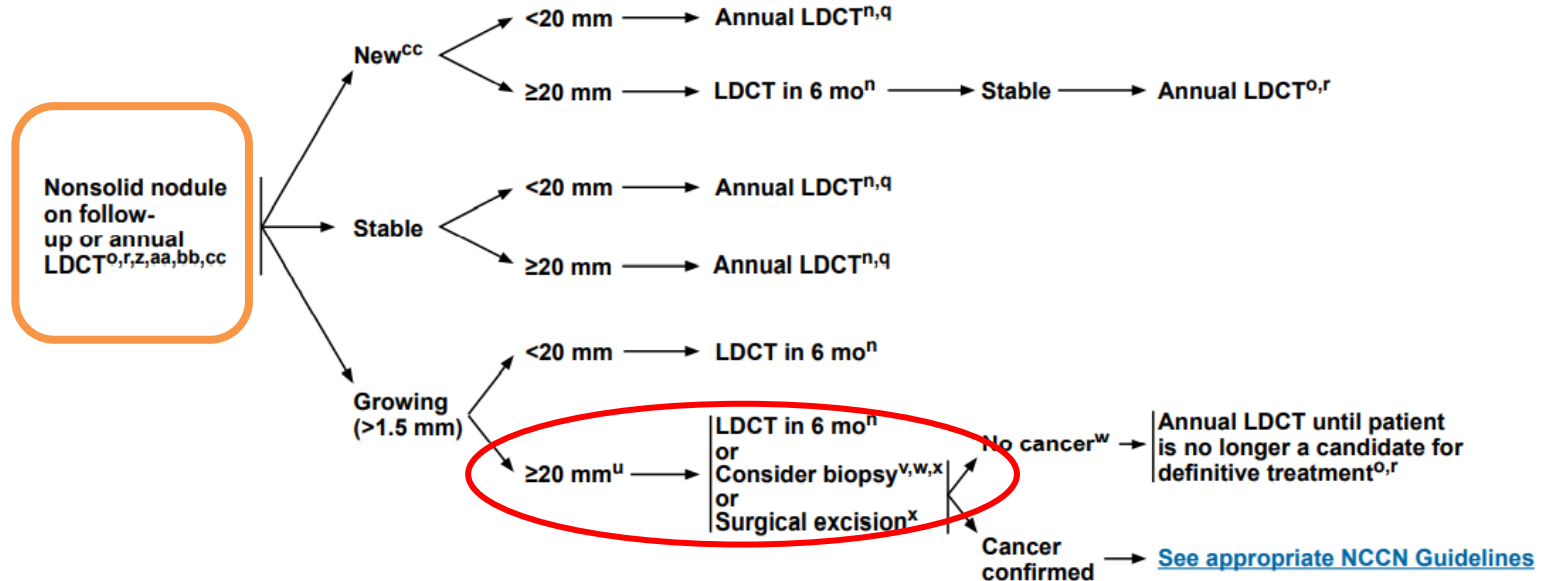
Gestione del paziente con Nodulo polmonare



Gestione del paziente con Nodulo polmonare



Gestione del paziente con Nodulo polmonare



Gestione del paziente con Nodulo polmonare



Lung-RADS® Version 1.1

Assessment Categories Release date: 2019

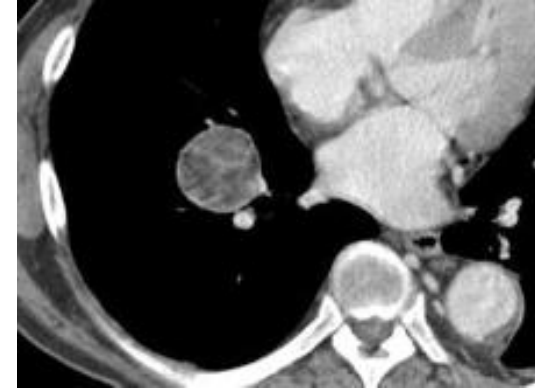
LUNG-RADS 1.1

- Rappresenta uno standard per i referti strutturati usati per lo screening
- Permette di catalogare le lesioni identificate in base al coefficiente di rischio
- Valuta dimensioni, numero, densità ed evoluzione delle lesioni identificate
- Verrà a breve aggiornato con l'introduzione delle lesioni cistiche

| Category Descriptor | Lung-RADS Score | Findings | Management | Risk of Malignancy | Est. Population Prevalence |
|--|-----------------|--|--|--------------------|----------------------------|
| Incomplete | 0 | Prior chest CT examination(s) being located for comparison Part or all of lungs cannot be evaluated | Additional lung cancer screening CT images and/or comparison to prior chest CT examinations is needed | n/a | 1% |
| Negative No nodules and definitely benign nodules | 1 | No lung nodules Nodule(s) with specific calcifications: complete, central, popcorn, concentric rings and fat containing nodules | | | |
| Benign Appearance or Behavior Nodules with a very low likelihood of becoming a clinically active cancer due to size or lack of growth | 2 | Perifissural nodule(s) (See Footnote 1) ≤ 10 mm (524 mm ³) Solid nodule(s): = 6 mm (≤ 113 mm ³) new < 4 mm (≤ 34 mm ³) Part solid nodule(s): = 6 mm total diameter (≤ 113 mm ³) on baseline screening Non solid nodule(s) (GGN): < 30 mm (≤ 14137 mm ³) OR ≥ 30 mm (≥ 14137 mm ³) and unchanged or slowly growing Category 3 or 4 nodules unchanged for ≥ 3 months | Continue annual screening with LDCT in 12 months | < 1% | 90% |
| Probably Benign Indolent(s) - short term follow up suggested; includes nodules with a low likelihood of becoming a clinically active cancer | 3 | Solid nodule(s): = 6 to < 8 mm (≥ 113 to < 268 mm ³) at baseline OR new 4 mm to < 6 mm (34 to < 113 mm ³) Part solid nodule(s) = 6 mm total diameter (≤ 113 mm ³) with solid component = 6 mm (≤ 113 mm ³) OR new < 6 mm total diameter (≤ 113 mm ³) Non solid nodule(s) (GGN) = 30 mm (≥ 14137 mm ³) on baseline CT or new | 6 month LDCT | 1-2% | 5% |
| Suspicious Findings for which additional diagnostic testing is recommended | 4A | Solid nodule(s): = 8 to < 15 mm (≥ 268 to < 1767 mm ³) at baseline OR growing = 6 mm (≤ 268 mm ³) OR new 5 to < 8 mm (113 to < 268 mm ³) Part solid nodule(s) with solid component = 6 mm to < 8 mm (≥ 113 to < 268 mm ³) OR with a new or growing = 4 mm (≤ 34 mm ³) solid component Endobronchial nodule | 3 month LDCT; PET/CT may be used when there is a ≥ 8 mm (≥ 268 mm ³) solid component | 5-15% | 2% |
| Very Suspicious Findings for which additional diagnostic testing and/or tissue sampling is recommended | 4B | Solid nodule(s) = 15 mm (≥ 1767 mm ³) OR new or growing, and = 6 mm (≥ 268 mm ³) Part solid nodule(s) with: a solid component = 8 mm (≥ 268 mm ³) OR a new or growing = 4 mm (≥ 34 mm ³) solid component | Chest CT with or without contrast, PET/CT and/or tissue sampling depending on the probability of malignancy and comorbidities. PET/CT may be used when there is a ≥ 8 mm (≥ 268 mm ³) solid component. For new large nodules that develop on an annual repeat screening CT, a 1 month LDCT may be recommended to address potentially infectious or inflammatory conditions | > 15% | 2% |
| Other Clinically Significant or Potentially Clinically Significant Findings (non lung cancer) | 5 | Modifier - may add on to category 0-4 coding | As appropriate to the specific finding | n/a | 10% |

Gestione del paziente con Nodulo polmonare

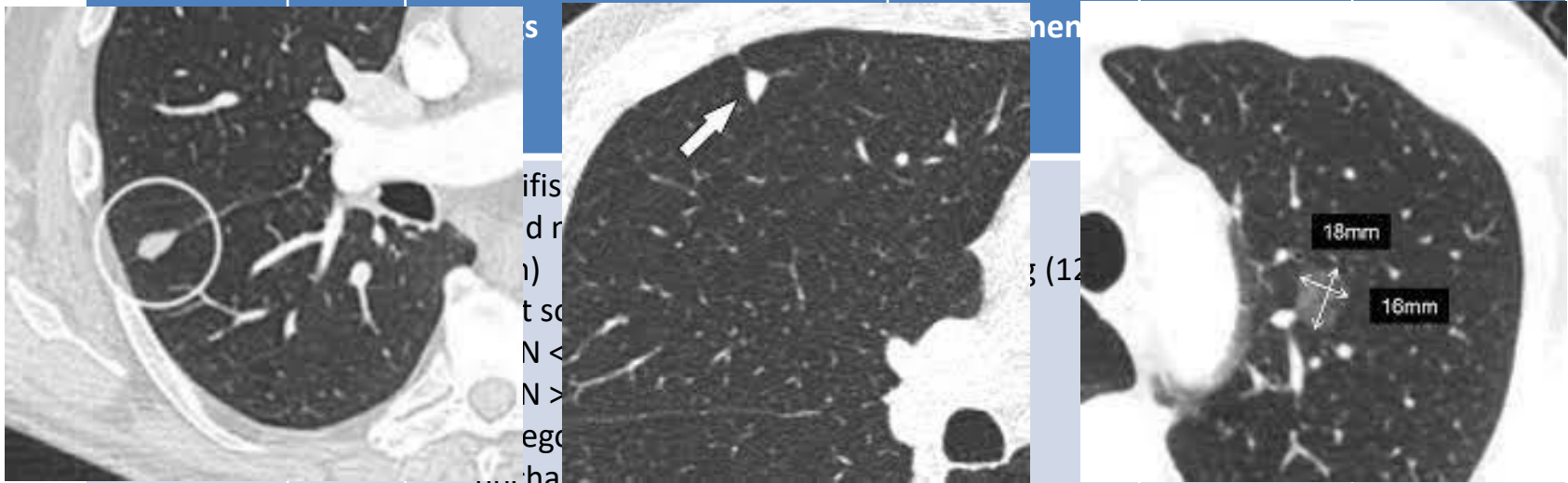
LUNG RADS 1



| Category | Score | Findings | Management | Risk of malignancy | Estimated prevalence |
|----------|-------|---|------------------------------------|--------------------|----------------------|
| Negative | 1 | Benign nodules (specific calcifications, fat) | Follow-up as scheduled (12 months) | <1% | 90% (cat 1 and 2) |

Gestione del paziente con Nodulo polmonare

LUNG RADS 2



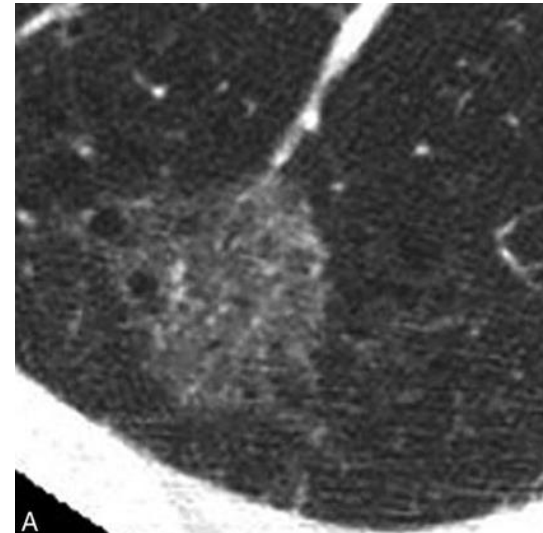
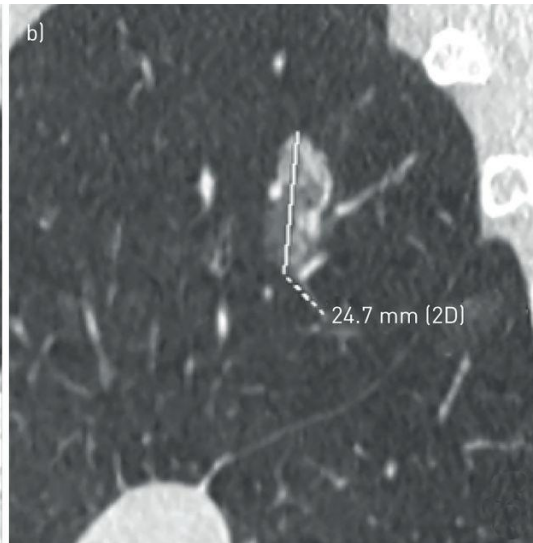
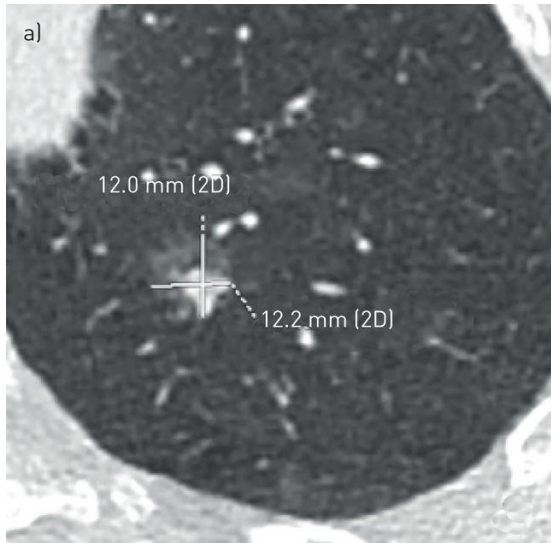
Gestione del paziente con Nodulo polmonare

LUNG RADS 3

| Category | Score | Findings | Management | Risk of malignancy | Estimated Prevalence |
|---|-------|--|---------------|--------------------|----------------------|
| Probably benign Possible likelihood to become cancer | 3 | Solid nodules >6 and <8mm Part-solid nodules >6 and <8mm New Solide nodules >4 and <6mm GGN > 20 mm New GGN at follow up | 6 months LDCT | 1-2% | 5% |

Gestione del paziente con Nodulo polmonare

LUNG RADS SCORE 3



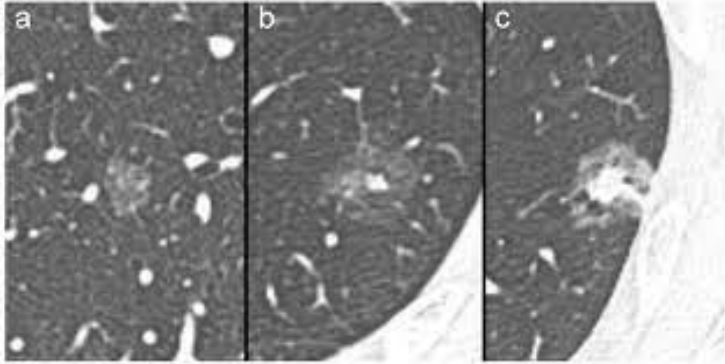
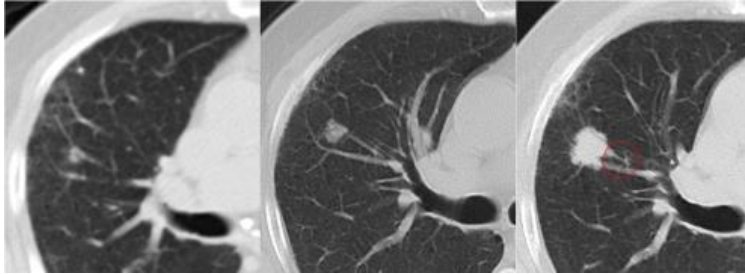
Gestione del Nodulo polmonare

LUNG RADS 4

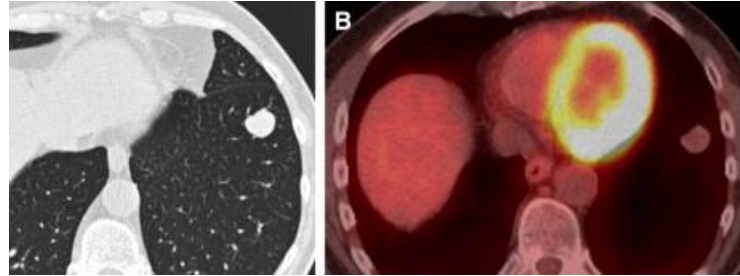
| Category | Score | Findings | Management | Risk of Malign. | Estimated Prevalence |
|---|-------|--|---|-----------------|----------------------|
| Suspicious Additional diagnostic test | 4A | Solid nodules >8 and <15mm New Solide nodules >6 and <8mm Solid nodule growing <8mm Part-solid nodules >6mm < 8 mm of solid component | 3 months LDCT PET CT for solid component >8mm | 5-15% | 2% |
| Category | Score | Findings | Management | Risk of Malign. | Estimated Prevalence |
| Very Suspicious Additional diagnostic or sampling suggested | 4B | Solid nodules > 15mm New Solide nodules >8mm Part-solid nodules >8 mm of solid component Cat. 3 and 4 nodules with additional suspicious findings | Contrast enh. CT biopsy PET CT for solid component >8mm 1 month LDCT | >15% | 2% |

Gestione del paziente con Nodulo polmonare

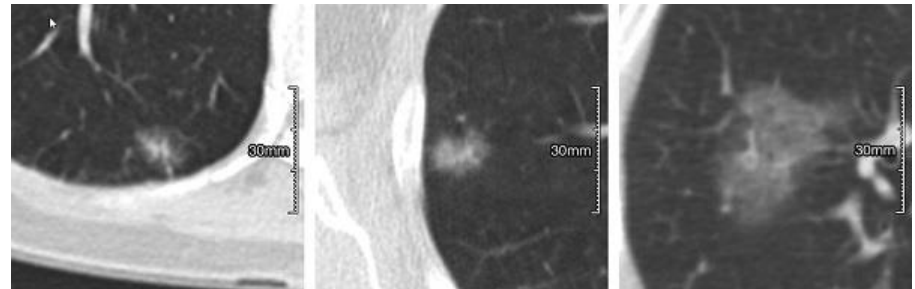
LUNG RADS 4A



LUNG RADS 4B



LUNG RADS 4B



a.

b.

c.

Gestione del paziente con Nodulo polmonare

LUNG RADS 5

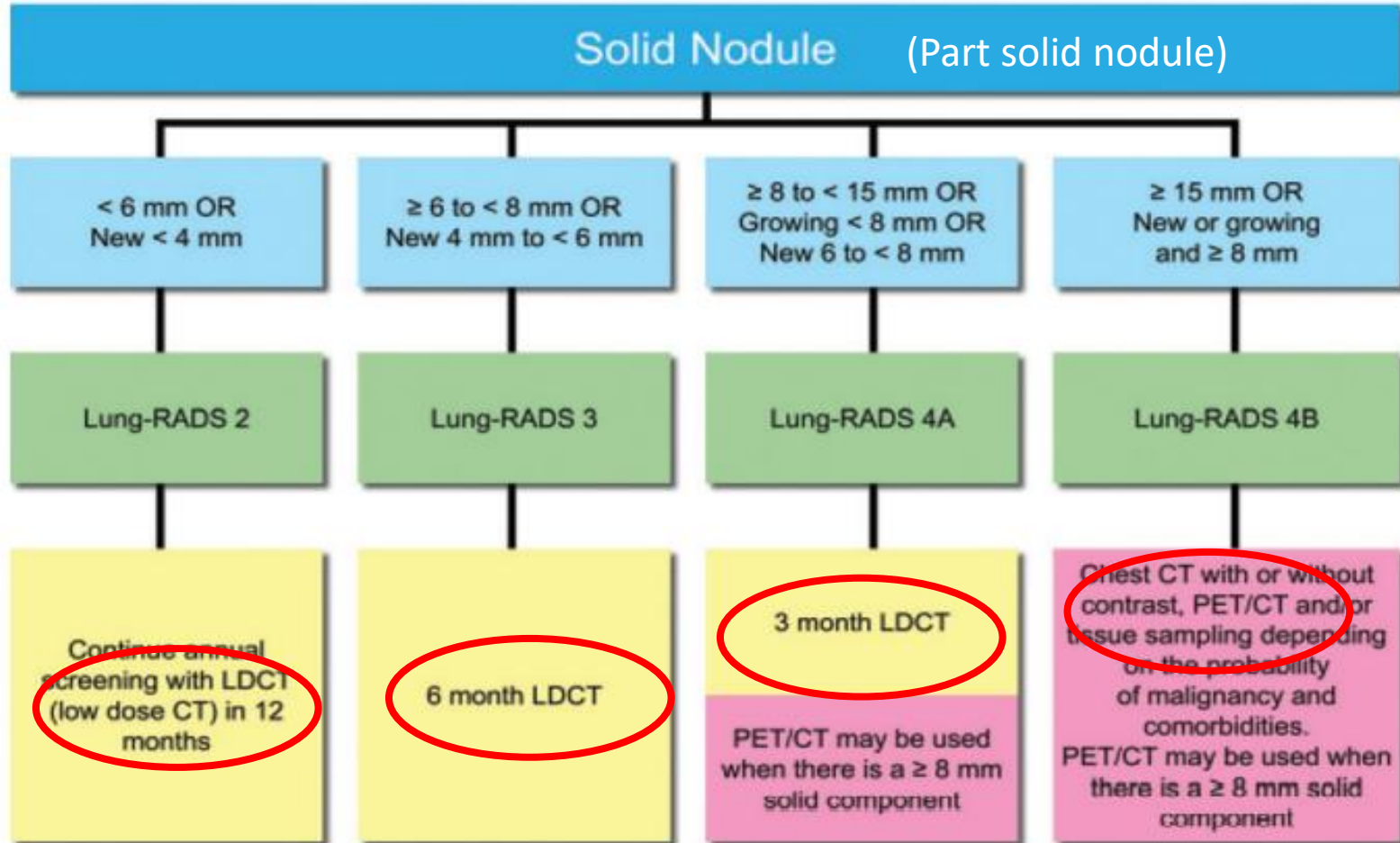
| Category | Score | Findings | Management | Risk of malignancy | Estimated prevalence |
|--|-------|---|---|--------------------|----------------------|
| Rilievi extra polmonari significativi | 5 | Possono modificare la valutazione dei rilievi polmonari | Da gestire in base alla sede e tipo di rilievo nel singolo Paziente | n/a | 10% |

Gestione del paziente con Nodulo polmonare

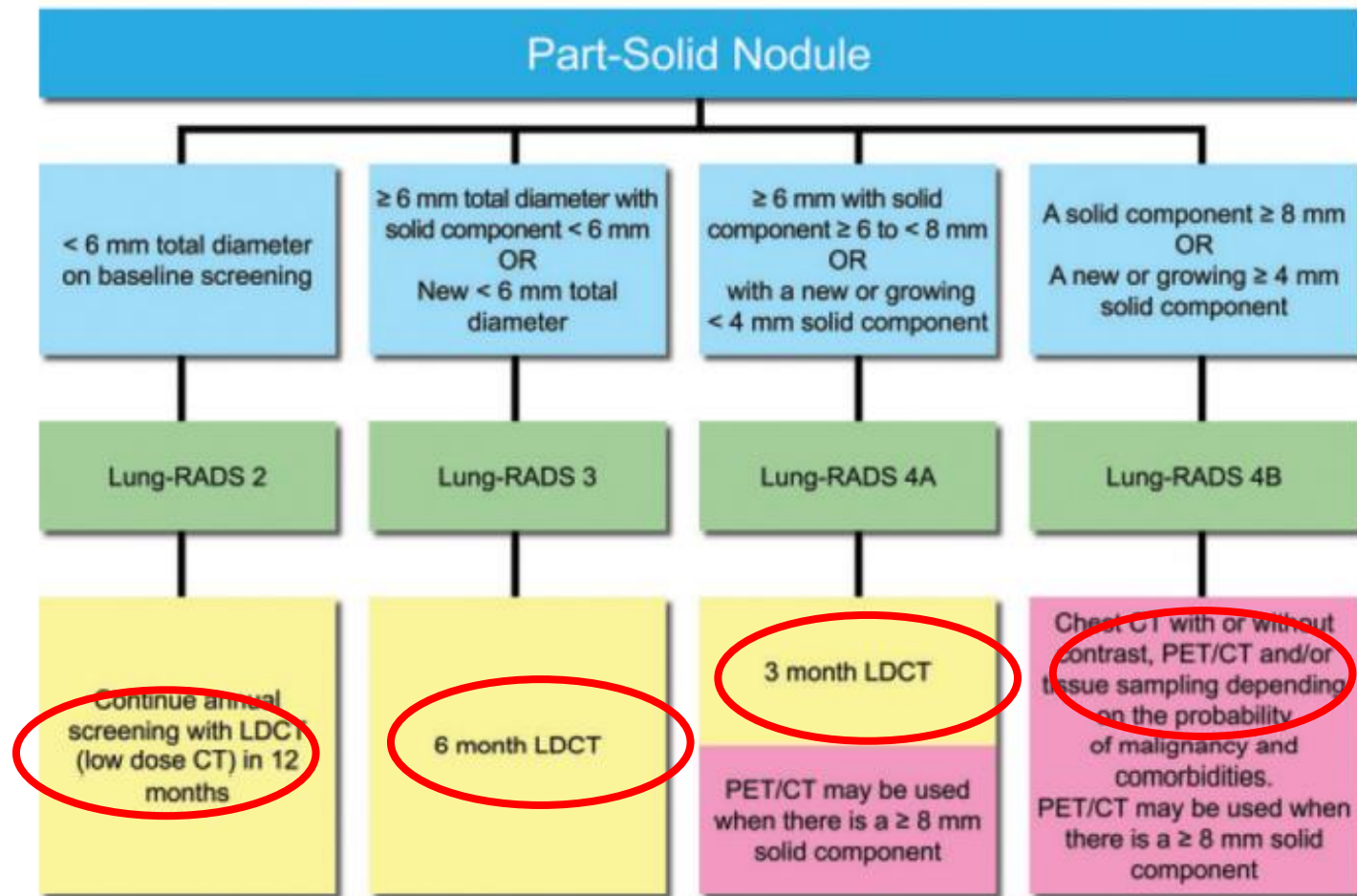
REPERTI COLLATERALI

- **Pneumopatie**
- Fibrosi polmonare
- Patologie infiammatorie
- sarcoidosi
- Tumore esofago/mediastino
- Linfomi e linfadenomegalie
- Lesioni tiroidee
- **Calcificazioni coronariche**
- Lesioni surrenaliche
- Lesioni epatiche/pancreatiche
- Ernia iatale
- Fratture vertebrali su osteoporosi
- Metastasi ossee e fratture patologiche
- Aneurismi

Management of Screen Detected Solid Nodule

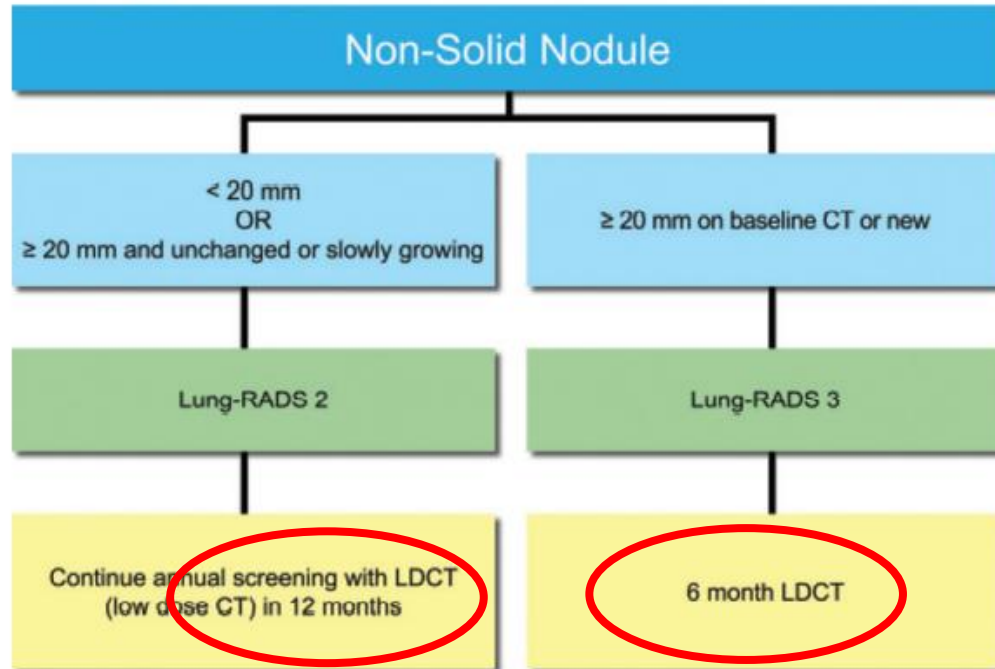


Management of Screen Detected Part-Solid Nodule



Gestione del paziente con Nodulo polmonare

Management of Screen Detected Non-Solid Nodule



GRAZIE PER L'ATTENZIONE
giovanni.foti@sacrocuore.it



Gestione del paziente con Nodulo polmonare

EVALUATION OF SCREENING FINDINGS

FOLLOW-UP OF SCREENING FINDINGS

