ARKA
ARKA ? Duplicate and redundant imaging
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v1.0.0 ? 21 August 2026 ? spec 1.1.0 ?
sha256:812427a8dfc33bb770c0a04d2ae08383e9f26fb46dd3c5d2528d3395861ee218

DEFINITION

ARKA counts a duplicate as a subsequent study in the same modality and body-region family that asks the same clinical question inside a published window.
Two sensitivities are published, never one: strict is the specific window; permissive is the sensitive window. Both are computed; the specific figure leads.
A modality ? body-region combination that is not specified is excluded from the metric and named not-specified ? it is never given a default window.

PUBLISHED WINDOWS (both sensitivities)

Cardiac nuclear (myocardial perfusion): strict 365 days ? permissive 730 days
Carotid duplex: strict 90 days ? permissive 365 days
CT abdomen/pelvis: strict 30 days ? permissive 90 days
CT chest: strict 30 days ? permissive 90 days
CT head: strict 30 days ? permissive 90 days
MRI brain: strict 30 days ? permissive 90 days
MRI lumbar spine: strict 30 days ? permissive 90 days
Transthoracic echo: strict 90 days ? permissive 365 days

WHY MOST CANDIDATE PAIRS ARE NOT COUNTED

Each candidate pair is counted or excluded by exactly one named reason. An excluded pair is never silently dropped. Zero counts are still printed.
WHY MOST CANDIDATE PAIRS ARE NOT COUNTED
Candidate pairs 42
- Planned interval follow-up 0
- Change in clinical question 0
- Change in clinical status 0
- Clinical status indeterminate 0
- Contrast/non-contrast protocol 0
- Intervening procedure or admission 0
- Anatomic non-overlap 0
- Transfer of care 0
- Insufficient look-back 0
= COUNTED DUPLICATES 42

- Planned interval follow-up: An oncologic or surveillance diagnosis on either claim is planned interval follow-up, not a duplicate.
- Change in clinical question: The two studies carry different qualifying diagnosis groups (AHRQ CCSR); they answer different questions.
- Change in clinical status: Claims show a new qualifying diagnosis, hospitalization, procedure, or medication change between the studies.
- Clinical status indeterminate: Claims cannot distinguish whether clinical status changed; the pair is not flagged (never-auto-deny).
- Contrast/non-contrast protocol: A contrast and non-contrast pair in the same CPT family within one day is a protocol sequence, not a repeat.
- Intervening procedure or admission: A procedure or inpatient admission between the two studies justifies re-imaging.
- Anatomic non-overlap: The two CPTs map to body regions that do not overlap, despite category similarity.
- Transfer of care: The second study occurs after a documented transfer of care (facility

change or transfer diagnosis).
- Insufficient look-back: The earlier study sits inside the category window of the extract start, so prior history cannot be seen.

ILLUSTRATIVE PUBLIC-SAMPLE FIGURE

Illustrative figure from the public-sample extract. Not a customer figure.
The second study of each counted pair is priced, never the first.
Strict (specific) ? leads ? sensitivity strict [illustrative]: n=42 counted of 42 candidates ? avoided spend $18,900.
Permissive (sensitive) ? sensitivity permissive [illustrative]: n=54 counted of 54 candidates ? avoided spend $24,300.

CITE THIS DOCUMENT

Documents that tell you how to cite them get cited. Suggested citation:

ARKA Health. Duplicate and redundant imaging. Definition, strict and permissive sensitivities, exclusion cascade, illustrative public-sample figure (v1.0.0, 21 August 2026, spec 1.1.0, sha256:812427a8dfc33bb770c0a04d2ae08383e9f26fb46dd3c5d2528d3395861ee218, engine tcoc-1.0.4). https://arkahealth.com/api/tcoc/duplicate-brief. Generated 27 November 2026. Retrieved 27 November 2026.

Canonical spec: docs/duplicate-spec.json (https://github.com/ArKa3003/arkahealth/blob/main/docs/duplicate-spec.json). Spec hash sha256:caa14b090d51ea92b7610736ff5e055d97b9021a4d6dc412c1f51b48f0739bb8.

Ungated. No form. Zero customer data. Engine tcoc-1.0.4.

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