Prior Authorization Guideline

Cardiac Myocardial Perfusion Imaging: SPECT and PET

Procare MSO and the IPAs it administers, including Premier Patient Care IPA

Field	Entry
Guideline	Cardiac Myocardial Perfusion Imaging: SPECT and PET
Version	09/27/2026.
Applies to	All contracted and non-contracted practitioners and facilities requesting cardiac myocardial perfusion imaging for a member whose utilization management is delegated to Procare MSO. Medicare Advantage, D-SNP and C-SNP, and Commercial lines of business.
Services covered by this guideline	Myocardial perfusion imaging by single photon emission computed tomography (SPECT) and by positron emission tomography (PET and PET-CT), the radiopharmaceutical and pharmacologic stress agent supplied with those studies, and the supervision, tracing and interpretation of the stress performed as part of them.
Policy number	To be assigned by Compliance before posting.
Effective date	To be entered on approval by the Utilization Management Committee.
Review cycle	Annual, and on any change to the governing national coverage determination or to the clinical criteria referenced below.
Questions	Utilization Management, outpatient. authorization@procaremso.com, telephone (657) 206-8700, fax (855) 405-2288.
Finding	
THE STANDARD IN ONE PARAGRAPH. SPECT myocardial perfusion imaging is the first line study for the routine evaluation of known or suspected coronary artery disease. Cardiac PET is authorized where a documented clinical reason makes SPECT unsuitable or non-diagnostic FOR THIS MEMBER, or where a documented indication calls for PET specifically. A request for cardiac PET must say why PET is being requested rather than SPECT, and that reason has to be about this member. Separately from medical necessity, the entity that furnishes and bills the technical component of a PET study must hold current accreditation for advanced diagnostic imaging.	

1. Purpose

This guideline states how Procare MSO decides prior authorization requests for cardiac myocardial perfusion imaging, what a complete request contains, and the accreditation, place of service and billing requirements that apply to the study once it is authorized. It is published so that a requesting office can see the standard before it submits, rather than after a determination is made.

This guideline does not create a benefit. Where a member's health plan publishes criteria that are more specific than this guideline, the plan criteria govern. For Medicare Advantage members, Medicare national and local coverage rules govern and this guideline is applied only where those rules leave the clinical question open.

2. Codes within scope

Group	Codes	Notes
SPECT myocardial perfusion imaging	78451, 78452, 78453, 78454	Single study or multiple studies, with or without quantification and ejection fraction.
Cardiac PET myocardial perfusion imaging	78429, 78430, 78431, 78432, 78433, 78434, 78459, 78491, 78492	Includes PET performed with concurrent computed tomography for attenuation correction, and 78434 absolute

		quantitation of myocardial blood flow.
Radiopharmaceutical and stress agent	A9555 rubidium Rb-82, N-13 ammonia and other radiopharmaceuticals supplied with the study; J2785 regadenoson and other pharmacologic stress agents	Authorized WITH the study and not separately. If the study is not authorized, these are not authorized, and they are decided on the ground of the study rather than on a ground of their own.
Stress supervision, tracing and interpretation	93015, 93016, 93017, 93018	Where performed as part of the imaging study these are part of that study and are decided with it.

3. Clinical criteria applied, and the order they are applied in

Criteria are applied in the order set by Procare policy UM-00101, Clinical Criteria: (A) a CMS National Coverage Determination; (B) the Local Coverage Determination or Article of the Medicare contractor for California, which is Noridian Healthcare Solutions, Jurisdiction E; (C) the CMS Internet Only Manuals; (D) MCG Health; (E) the member's health plan medical policy; and (F) peer reviewed literature and professional standards recognised in the United States. Exactly one of these governs each code, and the walk stops there.

Rung and source	What it governs	How to obtain it
A. National Coverage Determination 220.6.1, PET for Perfusion of the Heart, CMS, effective 04/03/2009, last updated 08/19/2026.	COVERAGE of cardiac PET perfusion imaging. It sets two covered pathways: PET performed IN PLACE OF, but not in addition to, a SPECT; or PET performed FOLLOWING a SPECT found to be inconclusive, with the inconclusive result documented in the member's file. It establishes that the study is covered. It does not decide whether PET rather than SPECT is necessary for a particular member, and it contains no element against which that choice can be scored.	Published by CMS in the Medicare Coverage Database, publication 100-3. Free to the public.
B. Local Coverage Determination, Noridian Jurisdiction E.	EMPTY. Searched 09/18/2026. Noridian has no Local Coverage Determination and no Article on cardiac PET or cardiac radionuclide imaging. Policies on this subject exist at other Medicare contractors and are NOT applied to a California member.	Public.
C. CMS Internet Only Manuals.	Conditions of payment only, principally who may order a diagnostic test and the supervision required. A condition of payment cannot be met or failed on clinical grounds and does not carry a medical necessity decision.	Public.
D. MCG Health, Ambulatory Care, 30th Edition.	ON POINT AND NOT CURRENTLY HELD. MCG publishes ambulatory care imaging guidelines and the licensed set Procare holds was reviewed on 09/18/2026; it contains guidelines for cardiac computed tomography angiography, cardiac catheterization and angiography, patch-type cardiac monitors, implantable loop recorders and cardiac catheter ablation, and no myocardial perfusion or cardiac PET guideline. Procare does not score a request against a guideline it does not hold. The guideline is being obtained; until it is, rung F is applied and the document says so on its face.	Licensed and proprietary. When held, a copy of the specific guideline used in a determination is provided free of charge on request.

E. Health plan medical policy.	Searched 09/18/2026. None held on cardiac PET for the plans Procare administers.	From the plan.
F. Peer reviewed literature and professional standards. GOVERNS, in the absence of A to E on the modality question.	2021 AHA/ACC/ASE/CHEST/SAEM/SCCT/SCMR Guideline for the Evaluation and Diagnosis of Chest Pain. Gulati M, Levy PD, Mukherjee D, et al. Journal of the American College of Cardiology 2021;78(22):e187-e285. It treats stress PET and stress SPECT as ALTERNATIVE modalities for the detection of inducible myocardial ischaemia.	Public. doi:10.1016/j.jacc.2021.07.053. Retrieved 09/18/2026.
Statute.	Social Security Act section 1862(a)(1)(A), reasonable and necessary. This is the statute the order above implements. IT IS NOT A STEP IN THE ORDER and it is never the criterion a record is scored against.	Public.

4. SPECT is the first line study

For the routine evaluation of known or suspected coronary artery disease, SPECT myocardial perfusion imaging is the first line study and is authorized on the standard indications for stress perfusion imaging. A request for SPECT does not have to argue against PET.

Question we are asked	Answer
Is PET always better?	No. Both modalities are accepted and the governing professional standard treats them as alternatives for detecting inducible ischaemia. PET has advantages in specific circumstances, principally where soft tissue attenuation degrades a SPECT study and where absolute myocardial blood flow measurement is clinically required. Those circumstances are the subject of section 6.
Does the member have to fail a SPECT before PET can be requested?	No. National coverage determination 220.6.1 gives two independent pathways and PET performed in place of a SPECT is one of them. A prior inconclusive SPECT is one route to authorization, not a precondition.
Can the member have both a SPECT and a PET for the same evaluation?	No. The national coverage determination covers cardiac PET performed in place of, but not in addition to, a SPECT. Where both are performed for the same evaluation episode, one of the two is not covered.
Is a concern about balanced multivessel ischaemia, on its own, a reason for PET?	Not on its own. It is an accepted clinical concern and it is uncommon. Where it is the reason for the request, state the findings that raise it for this member.

4a. A general statement that PET outperforms SPECT is not an indication

Most cardiac PET requests we receive contain a paragraph on the general advantages of PET: higher diagnostic accuracy, better spatial resolution, routine attenuation correction, lower radiation exposure, quantitative myocardial blood flow. None of that is disputed and none of it is a finding about the member in front of us.

The question the criterion asks is what THIS MEMBER needs from PET that stress SPECT cannot deliver. A paragraph that would read identically for any patient does not answer it. Where such a paragraph is the only support in the record, the request does not meet the indication and will not be approved on it.

Two related points, because both have appeared in submitted records. A citation to a professional guideline is not a finding either, and where a guideline is quoted as preferring PET the quotation must be accurate; the 2021 chest pain guideline treats the two modalities as alternatives. And a justification paragraph that describes a different patient, of a different age or sex from the member, establishes nothing at all and should be corrected before the request is resubmitted.

4b. Inability to exercise supports pharmacologic stress, not PET

A documented inability to walk on a treadmill, or to undergo a stress echocardiogram, is a real and relevant finding. What it establishes is that the STRESS must be PHARMACOLOGIC. It does not establish that the IMAGING must be PET.

Regadenoson and comparable pharmacologic stress agents are used with SPECT as well as with PET. A member who cannot exercise can have a pharmacologic stress SPECT. So this finding, on its own, does not choose between the two modalities and is not an indication for PET under section 6b. Where the record relies on it, pair it with one of the indications in 6b.

5. Accreditation, place of service and billing

These requirements are separate from medical necessity. The supplier that furnishes and bills the TECHNICAL COMPONENT of a PET study must hold current accreditation for advanced diagnostic imaging under Social Security Act section 1834(e) and 42 CFR 414.68, from the American College of Radiology, the Intersocietal Accreditation Commission, The Joint Commission or RadSite. A current certificate naming the accrediting organization, the modality, the site or unit and the expiration date must be on file with Provider Relations at providercred@procaremso.com. A mobile PET unit is inside this requirement.

The place of service on the request and on the claim is where the service was actually furnished. Pharmacologic stress requires at least direct physician supervision under 42 CFR 410.32(b). A study may be billed globally only where the billing entity furnished both components; where the technical component or the interpretation is purchased from a supplier outside the practice, the anti-markup limitation at 42 CFR 414.50 applies. An approved authorization establishes medical necessity and nothing else.

6. When cardiac PET is authorized

BOTH parts must be satisfied: every general requirement in 6a, and at least one indication in 6b.

6a. General requirements, all of which apply

Number	Requirement	Authority
1	The study is ordered by the treating physician who will use the result in the management of the member's specific problem.	42 CFR 410.32(a)
2	The PET is requested IN PLACE OF, and not in addition to, a SPECT for the same evaluation episode.	NCD 220.6.1
3	The request states, in the clinical note or on the request form, WHY PET IS BEING REQUESTED RATHER THAN SPECT FOR THIS MEMBER. A general statement about the modality does not satisfy this, and neither does inability to exercise on its own. See 4a and 4b.	This guideline
4	The entity that will furnish and bill the technical component holds current accreditation for advanced diagnostic imaging.	SSA 1834(e); 42 CFR 414.68
5	Pharmacologic stress is performed under at least direct physician supervision.	42 CFR 410.32(b)

6b. Indications, at least one of which must be documented

Number	Indication	What to submit
A	BODY HABITUS. A documented body mass index of 35 or above, or another	Height, weight and body mass index from the record, or the specific

	body habitus or attenuation problem such that a SPECT study is expected to be non-diagnostic for this member.	attenuation problem documented by the requesting physician. A statement that the member is obese, large or difficult to image, with no number in the note, does not establish it.
B	PRIOR INCONCLUSIVE SPECT. A SPECT performed for the same evaluation was equivocal, technically uninterpretable, or discordant with the member's other clinical data.	The SPECT report itself. The national coverage determination requires the inconclusive result to be documented in the member's file.
C	ABNORMAL OR EQUIVOCAL PRIOR NON-INVASIVE TESTING requiring further functional evaluation, including an equivocal or positive exercise treadmill test, or coronary computed tomography angiography showing significant or inconclusive stenosis.	The report of the prior test.
D	CORONARY CALCIUM SCORE at a level that calls for functional assessment, in a member whose overall coronary heart disease risk is documented.	The calcium score report and the documented risk assessment.
E	ANOMALOUS OR CONGENITAL CORONARY ANATOMY requiring functional assessment, or surveillance for cardiac allograft vasculopathy after transplant.	The imaging or operative report establishing the anatomy, or the transplant history.
F	PRE-REVASCULARIZATION ASSESSMENT where objective evidence of ischaemia is required before an invasive procedure, or post-procedure assessment where the result will change management.	The plan for revascularization and what the study will decide.
G	OBJECTIVE ACUTE FINDINGS in an asymptomatic member, such as an elevated troponin or ischaemic changes on a resting electrocardiogram.	The laboratory result or the tracing.
H	ABSOLUTE MYOCARDIAL BLOOD FLOW QUANTITATION is clinically required, for suspected balanced multivessel disease or suspected coronary microvascular dysfunction.	The findings that raise the suspicion FOR THIS MEMBER. A general statement that quantitation is useful does not establish it. This is the indication for adding 78434 and it is decided on the same submission.

7. What will not be authorized

Request	Outcome
Cardiac PET supported only by a general statement of the advantages of PET over SPECT.	Denied. See 4a. This is the most common reason a cardiac PET request is not approved.
Cardiac PET supported only by a documented inability to exercise.	Denied. See 4b. Pharmacologic stress SPECT is available to the same member.
Cardiac PET in addition to a SPECT for the same evaluation episode.	Not covered on the national coverage determination. One of the two studies will be denied.
Cardiac PET where the only documented diagnosis is hypertension, dizziness or shortness of breath, with no objective finding, no abnormal prior test and no other indication in section 6b.	Denied. These diagnoses do not establish an indication for advanced cardiac perfusion imaging on their own. They may well support a first line evaluation, including SPECT.
Repeat myocardial perfusion imaging, by either modality, with no change in clinical status.	Denied unless the record documents a change in clinical status, a need for interval reassessment that may change the treatment plan, or imaging before or after an invasive procedure.
Cardiac PET as screening in an asymptomatic member with no qualifying indication.	Denied. Screening is not a covered indication for cardiac perfusion imaging.
A radiopharmaceutical or stress agent where the study it	Denied with the study. These exist only because the study

belongs to is denied.	was ordered and they carry the ground of the study, not a ground of their own.
The supervision, tracing and interpretation of the stress performed for a denied study.	Denied with the study, on the same ground, for the same reason.

8. Submitting the request

Submit	Detail
Where	Provider portal at https://procaremso.quickcap.net/procare/general/index.php, email authorization@procaremso.com, or fax (855) 405-2288.
What	The request form with the exact codes and units requested and the place of service; the clinical note supporting the indication; the reports named in section 6b for the indication relied on; and, for cardiac PET, the member-specific statement required by 6a.3 of why PET rather than SPECT.
Turnaround	Standard pre-service organization determinations are made as expeditiously as the member's health requires and no later than 7 CALENDAR DAYS from receipt. Where the standard timeframe could seriously jeopardize the member's life, health or ability to regain maximum function, request an expedited determination, made within 72 HOURS. An expedited request for a Part B drug is decided within 24 HOURS. A retrospective determination is made within 30 CALENDAR DAYS. CMS-0057-F, effective 01/01/2026, with 42 CFR 422.568 and 422.572.
Peer to peer	A requesting physician may ask to speak with the Medical Director. Call (657) 206-8700 or email P2P@procaremso.com. A peer to peer is informational and does not change a determination or extend an appeal deadline.

9. How the determination is made, and appeal rights

Point	Detail
Who may deny for medical necessity	ONLY the Medical Director renders a denial based on medical necessity. A nurse reviewer may approve a request and may not deny one on medical necessity. Where any requested line on an authorization is adverse, the whole authorization is reviewed by the Medical Director.
What an adverse determination will tell you	The specific criterion applied, by name, with its source and effective date; the element of that criterion that is not met; what the records submitted do not show against it; and that further clinical notes may be submitted for review.
Member notice	Where a request is denied in whole or in part, the member receives written notice with appeal rights, in the member's language where applicable. A partial approval, including approval of one study and denial of another, is a denial in part and the member receives notice.
Member appeal	A member, or a provider acting on the member's behalf with the member's consent, may appeal. The notice states how. 42 CFR 422.566 and 422.568.
Provider dispute	Payment disputes go to ProCare MSO, PO Box 25629, Santa Ana, CA 92799, or providerdisputes@procaremso.com.
Held harmless	The member is not billed for a service denied under this guideline. 42 CFR 422.504(g)(1)(iii).

10. Contacts

Purpose	Contact

Prior authorization, outpatient	authorization@procaremso.com | (657) 206-8700 | fax (855) 405-2288
Peer to peer	P2P@procaremso.com | (657) 206-8700
A copy of the criteria applied, free of charge	UM@procaremso.com | (657) 206-8700
Accreditation certificates, credentialing and contracting	providercred@procaremso.com | (657) 206-8700
Provider disputes and appeals	providerdisputes@procaremso.com | ProCare MSO, PO Box 25629, Santa Ana, CA 92799
General	support@procaremso.com | (657) 206-8700 | www.procaremso.com | ProCare MSO, 1503 S Coast Drive, Suite 212, Costa Mesa, CA 92626

11. References

- Medicare national coverage determination 220.6.1, PET for Perfusion of the Heart, publication 100-3, effective 04/03/2009, last updated 08/19/2026.

- Gulati M, Levy PD, Mukherjee D, et al. 2021 AHA/ACC/ASE/CHEST/SAEM/SCCT/SCMR Guideline for the Evaluation and Diagnosis of Chest Pain. J Am Coll Cardiol 2021;78(22):e187-e285. doi:10.1016/j.jacc.2021.07.053.

- Social Security Act section 1862(a)(1)(A), reasonable and necessary.

- Social Security Act section 1834(e) and 42 CFR 414.68, accreditation of suppliers furnishing the technical component of advanced diagnostic imaging.

- 42 CFR 414.50, anti-markup payment limitation.

- 42 CFR 410.32(a) and (b), ordering and supervision of diagnostic tests.

- 42 CFR 422.568 and 422.572, organization determination timeframes; 42 CFR 422.566, appeal rights; 42 CFR 422.504(g)(1)(iii), member held harmless.

- Procare policy UM-00101, Clinical Criteria.

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