NICE National Institute for Health and Care Excellence

NICE Pathways

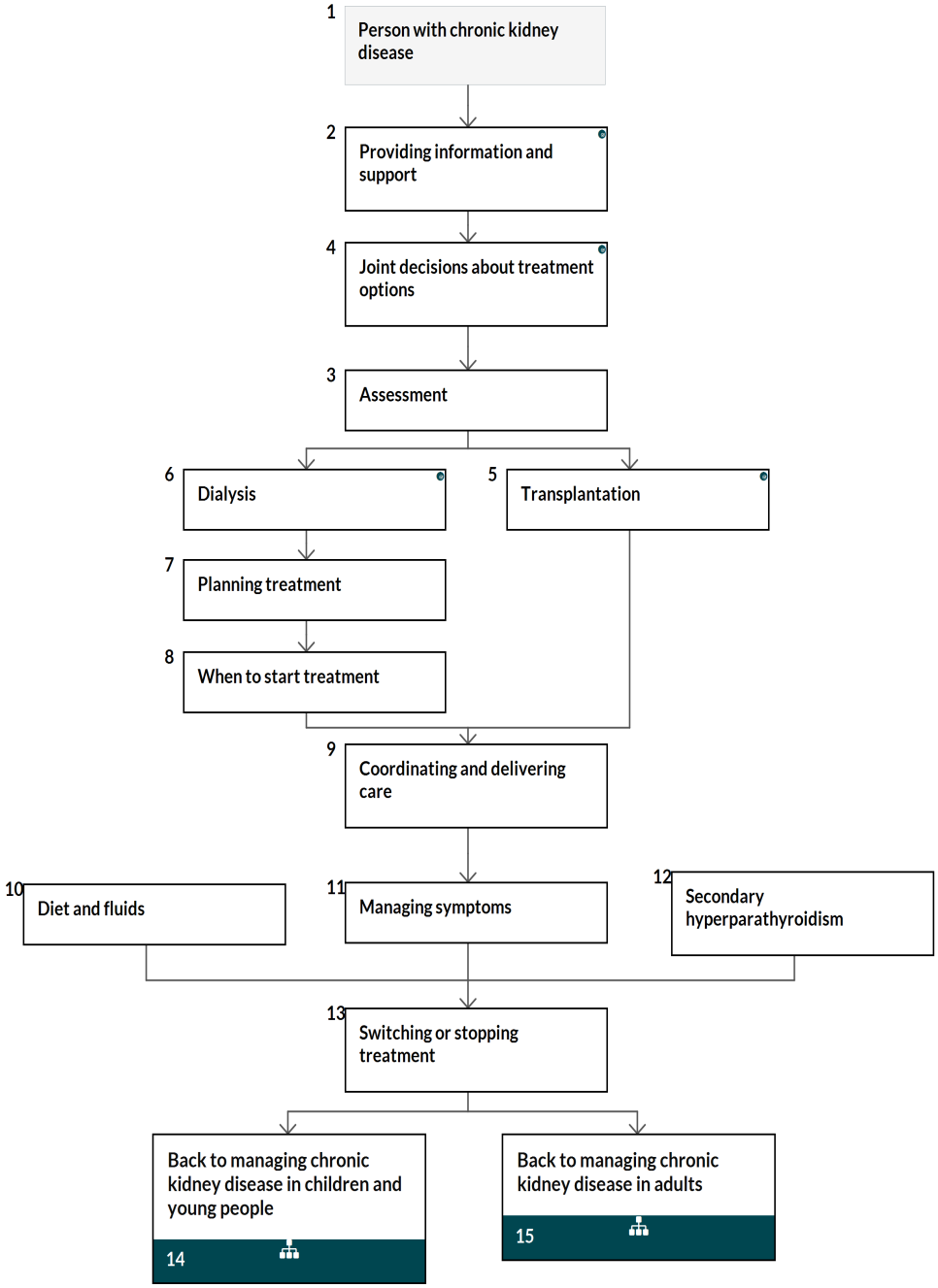
Renal replacement therapy and conservative management for people with chronic kidney disease

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/chronic-kidney-disease
NICE Pathway last updated: 24 November 2021

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Person with chronic kidney disease

No additional information

2 Providing information and support

Contact details

Provide the person with the contact details of the healthcare professional responsible for their overall renal care:

- before they start RRT or conservative management, and
- when they switch from one modality to another.

See the NICE guideline to find out why we made this recommendation and how it might affect practice.

Information and support

To enable people, and their families and carers (as appropriate), to make informed decisions, offer balanced and accurate information about:

- all treatments available to them (including RRT modalities and conservative management), and
- how the treatments may affect their lives.

See information about treatments and how they may affect lifestyle [See page 20] for more details.

Recognise the psychological impact of a person being offered RRT or conservative management and discuss what psychological support may be available to help with decision-making.

Discuss with people which treatment options are available to them and explain why any options may be inappropriate or not advised.

Offer oral and written information and support early enough to allow time for people to fully understand their treatment options and make informed decisions. Information should be in an

accessible format.

Direct people to other sources of information and support (for example, online resources, pre-dialysis classes and peer support).

Remember that some decisions must be made months before RRT is needed (for example, a fistula is created at least 6 months before starting dialysis).

Be prepared to discuss the information provided both before and after decisions are made, in line with the person's wishes.

Take into account information the person has obtained from other sources (such as family members and carers) and how this information has influenced their decision.

Ensure that healthcare professionals offering information have specialist knowledge about late stage chronic kidney disease and the skills to support shared decision-making (for example, presenting information in a form suitable for developmental stage).

Offer people who have presented late, or who started dialysis in an unplanned way, the same information as people who present at an earlier stage.

Follow NICE's recommendations on enabling adults to actively participate in their NHS care in the NICE Pathway on patient experience in adult NHS services and information and education for adults with chronic kidney disease.

Follow NICE's recommendations on enabling participation in care decisions in the NICE Pathway on babies, children and young people's experience of healthcare.

NICE has written information for the public on renal replacement therapy and conservative management.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Renal replacement therapy services for adults

1. Education programmes

3 Assessment

When to assess

Start assessment for RRT or conservative management at least 1 year before therapy is likely to be needed, including for those with a failing transplant.

See the NICE guideline to find out why we made this recommendation and how it might affect practice.

Assessing the condition

Involve the person and their family members or carers (as appropriate) in shared decision-making over the course of assessment to include:

- clinical preparation
- psychological evaluation, preparation and support
- the person's individual preferences for type of RRT and when to start
- how decisions are likely to affect daily life.

Consider further assessment by a clinical psychologist or psychiatrist for:

- all children and young people being considered for a transplant, and
- adults being considered for a transplant if risk factors for poor outcomes have been identified; these may include:
  - lack of social support
  - neurocognitive issues
  - non-adherence (medicines, diet, hospital appointments)
  - poor understanding of process and complexities of treatment
  - poorly controlled mental health conditions or severe mental illness
  - substance misuse or dependence.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

4 Joint decisions about treatment options

Offer a choice of RRT or conservative management to people who are likely to need RRT. Conservative management for children should only be considered within appropriate regulatory frameworks. See the NICE Pathway on planning and managing end of life care for a child or young person with a life-limiting condition.

Ensure that decisions about RRT modalities or conservative management are made jointly with the person (or with their family members or carers for children or adults lacking capacity) and healthcare team, taking into account:

- predicted quality of life
- predicted life expectancy
- the person's preference (see providing information and support [See page 3])
- other factors such as co-existing conditions.

Offer people (and their family members or carers, as appropriate) regular opportunities:

- to review the decision regarding RRT modalities or conservative management
- to discuss any concerns or changes in their preferences.

For guidance on caring for an adult at the end of life see the NICE Pathway on end of life care for people with life-limiting conditions.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Renal replacement therapy services for adults

3. Transplantation – on dialysis

5 Transplantation

Discuss the individual factors that affect the risks and benefits of transplantation with all people

who are likely to need RRT, and their family members or carers (as appropriate).

Include living donor transplantation in the full informed discussion of options for RRT.

Offer a pre-emptive living donor transplant (when there is a suitable living donor) or pre-emptive listing for deceased donor transplantation to people considered eligible after a full assessment.

Do not exclude people from receiving a kidney transplant based on BMI alone.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Machine perfusion systems and cold static storage of kidneys from deceased donors

The following recommendations are from NICE technology appraisal guidance on machine perfusion systems and cold static storage of kidneys from deceased donors.

This technology appraisal covers the available methods of storing kidneys from deceased donors – that is, LifePort kidney transporter, Belzer University of Wisconsin (Belzer UW) storage solution and Marshall's hypertonic citrate solution. No cost data were available to the committee to allow recommendations to be made for the RM3 renal preservation system.

Machine perfusion using the LifePort kidney transporter and cold static storage using Belzer UW storage solution or Marshall's hypertonic citrate solution are recommended as options for the storage of kidneys from deceased donors.

The choice of storage method should take into account clinical and logistical factors in both the retrieval teams and transplant centres. In situations where different storage methods are considered equally appropriate, then the least costly should be used.

NICE has written information for the public on machine perfusion and cold static storage of kidneys.

Immunosuppressive therapy for kidney transplant in children and young people

The following recommendations are from NICE technology appraisal guidance on immunosuppressive therapy for kidney transplant in children and young people.

This guidance makes recommendations on using basiliximab, rabbit anti-human thymocyte immunoglobulin, tacrolimus (immediate-release and prolonged-release), mycophenolate mofetil,

mycophenolate sodium, sirolimus, everolimus and belatacept after kidney transplant in children and young people. The recommendations apply only to the initial immunosuppressive therapy (induction and maintenance therapy) started around the time of kidney transplant.

It was outside the scope of the appraisal to make recommendations on using azathioprine or corticosteroids after kidney transplant in children and young people.

Under an exceptional directive from the Department of Health, the appraisal committee was allowed to make recommendations about using drugs outside the terms of their marketing authorisations if there was compelling evidence of their safety and effectiveness.

Basiliximab, when used as part of an immunosuppressive regimen that includes a calcineurin inhibitor, is recommended as an initial option to prevent organ rejection in children and young people having a kidney transplant.[1,2]

Immediate-release tacrolimus, when used as part of an immunosuppressive regimen, is recommended as an initial option to prevent organ rejection in children and young people having a kidney transplant. Treatment should normally be started with the least expensive product.[3] However, treatment can be started with an alternative dosage form if the least expensive product is not suitable (for example, if the child or young person is not able to swallow capsules or they are unable to have a particular ingredient because of allergy or religious reasons). Tacrolimus granules for oral suspension (Modigraf) should be used only if the company provides it at the same price or lower than that agreed with the Commercial Medicines Unit.

Mycophenolate mofetil, when used as part of an immunosuppressive regimen, is recommended as an initial option to prevent organ rejection in children and young people having a kidney transplant. Treatment should normally be started with the least expensive product. However, treatment can be started with an alternative dosage form if the least expensive product is not suitable (for example, if the child or young person is not able to swallow capsules or they are unable to have a particular ingredient because of allergy or religious reasons).'

Rabbit anti-human thymocyte immunoglobulin, prolonged-release tacrolimus, mycophenolate sodium, sirolimus, everolimus and belatacept are not recommended as initial treatments to prevent organ rejection in children and young people having a kidney transplant.

The committee was unable to make recommendations on any of the technologies considered in this appraisal as options for preventing organ rejection in children or young people who are, or

[1] August 2017: the use of basiliximab (with tacrolimus) and mycophenolate mofetil (with tacrolimus) is outside the terms of the marketing authorisations for basiliximab and for mycophenolate mofetil. If these combinations are prescribed, the prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. For further information, see the General Medical Council's guidance on Good practice in prescribing and managing medicines and devices.

[2] The Department of Health has stated that the statutory funding requirement does not apply to drugs that are used outside the terms of their marketing authorisation.

[3] The Medicines and Healthcare products Regulatory Agency (MHRA) has advised that to maintain therapeutic response when a patient is stabilised on a particular brand, oral tacrolimus products should be prescribed and dispensed by brand name only. If a prescriber considers that switching to a different brand of oral tacrolimus would be of benefit, the change requires careful supervision and therapeutic monitoring by an appropriate specialist. See the MHRA's advice on oral tacrolimus products.

become, unable to have the technologies recommended above or azathioprine and corticosteroids (for example, because of treatment failure, contraindications, or intolerance such as nephrotoxicity associated with calcineurin inhibitors, or thrombotic microangiopathy). This includes children and young people who:

- are unable to continue having their initial therapy and need to switch to another therapy during the life of their graft or
- have a second or subsequent transplant, having previously found that 1 or more of the recommended initial treatments or standard treatments are clinically unsuitable, for example because of treatment failure, contraindications or intolerance.

These recommendations are not intended to affect treatment with any of the technologies in this appraisal that was started in the NHS before this guidance was published. Children and young people having treatment outside these recommendations, or for whom the committee were unable to make a recommendation, may continue without change to the funding arrangements in place for them before this guidance was published, until they and their NHS clinician consider it appropriate to stop. This decision should be made jointly by the clinician and the child or young person or their parents or carers.

NICE has written information for the public on immunosuppressive therapy for kidney transplant in children and young people.

Immunosuppressive therapy for kidney transplant in adults

The following recommendations are from NICE technology appraisal guidance on immunosuppressive therapy for kidney transplant in adults.

This guidance makes recommendations on using basiliximab, rabbit anti-human thymocyte immunoglobulin, tacrolimus (immediate-release and prolonged-release), mycophenolate mofetil, mycophenolate sodium, sirolimus, everolimus and belatacept after kidney transplant in adults. The recommendations apply only to the initial immunosuppressive therapy (induction and maintenance therapy) started around the time of kidney transplant.

It was outside the scope of the appraisal to make recommendations on using the standard triple therapy regimen of ciclosporin, azathioprine and a corticosteroid after kidney transplant in adults.

Under an exceptional directive from the Department of Health, the appraisal committee was allowed to make recommendations about using drugs outside the terms of their marketing authorisations if there was compelling evidence of their safety and effectiveness.

Basiliximab, when used as part of an immunosuppressive regimen that includes a calcineurin inhibitor, is recommended as an initial option to prevent organ rejection in adults having a kidney transplant.'

Immediate-release tacrolimus, when used as part of an immunosuppressive regimen, is recommended as an initial option to prevent organ rejection in adults having a kidney transplant. Treatment should normally be started with the least expensive product. However, treatment can be started with an alternative dosage form if the least expensive product is not suitable (for example, if the person is not able to swallow capsules as a result of a disability or they are unable to have a particular ingredient because of allergy or religious reasons). Tacrolimus granules for oral suspension (Modigraf) should be used only if the company provides it at the same price or lower than that agreed with the Commercial Medicines Unit.

Mycophenolate mofetil, when used as part of an immunosuppressive regimen, is recommended as an initial option to prevent organ rejection in adults having a kidney transplant. Treatment should normally be started with the least expensive product. However, treatment can be started with an alternative dosage form if the least expensive product is not suitable (for example, if the person is not able to swallow capsules as a result of a disability or they are unable to have a particular ingredient because of allergy or religious reasons).'

Rabbit anti-human thymocyte immunoglobulin, prolonged-release tacrolimus, mycophenolate sodium, sirolimus, everolimus and belatacept are not recommended as initial treatments to prevent organ rejection in adults having a kidney transplant.

The committee was unable to make recommendations on any of the technologies considered in this appraisal as options for preventing organ rejection in adults who are, or become, unable to have the technologies recommended above or standard triple therapy with ciclosporin, azathioprine and a corticosteroid (for example, because of treatment failure, contraindications, or intolerance such as nephrotoxicity associated with calcineurin inhibitors, or thrombotic microangiopathy). This includes adults who:

- are unable to continue having their initial therapy and need to switch to another therapy during the life of their graft or
- have a second or subsequent transplant, having previously found that 1 or more of the recommended initial treatments or standard treatments are clinically unsuitable for example, because of treatment failure, contraindications or intolerance.

These recommendations are not intended to affect treatment with any of the technologies in this appraisal that was started in the NHS before this guidance was published. Adults having

treatment outside these recommendations, or for whom the committee were unable to make a recommendation, may continue without change to the funding arrangements in place for them before this guidance was published, until they and their NHS clinician consider it appropriate to stop.

NICE has written information for the public on immunosuppressive therapy for kidney transplant in adults.

Interventional procedures

NICE has published guidance on laparoscopic live donor simple nephrectomy with **normal arrangements** for consent, audit and clinical governance.

NICE has published guidance that robot-assisted kidney transplant should only be used with **special arrangements** or in the context of **research** (see guidance for details).

Organ donation

For more information on organ donation, see the NICE Pathway on organ donation for transplantation.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

Renal replacement therapy services for adults

2. Transplantation – pre-emptive

3. Transplantation – on dialysis

7. Transplantation – rapid access to a specialist histopathology service

6 Dialysis

Options

Offer a choice of dialysis modalities at home or in centre ensuring that the decision is informed by clinical considerations and patient preferences.

Offer all people who choose peritoneal dialysis a choice of CAPD or APD, if this is medically appropriate.

Consider peritoneal dialysis as the first choice for children 2 years or under.

For people who choose HD/HDF:

- Consider HDF rather than HD if in centre (hospital or satellite unit).
- Consider HDF or HD at home, taking into account the suitability of the space and facilities.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Medtech innovation briefings

NICE has published medtech innovation briefings on:

- ClearGuard HD Antimicrobial Barrier Cap for preventing haemodialysis catheter-related bloodstream infections
- Tegaderm CHG securement dressing for vascular access sites
- U-Drain for people needing night drainage of urine or dialysis fluid
- The NxStage System One NX1000-1 home haemodialysis device for renal replacement therapy in chronic kidney disease.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

Renal replacement therapy services for adults

5. Home-based dialysis

8. Haemodialysis access – monitoring and maintaining vascular access

7 Planning treatment

Discuss with the person, their family members and carers (as appropriate) the risk and benefits of the different types of dialysis access, for example, fistula, graft, central venous or peritoneal dialysis catheter.

When peritoneal dialysis is planned via a catheter placed by an open surgical technique, aim to create the access around 2 weeks before the anticipated start of dialysis.

When HDF or HD is planned via an arteriovenous fistula, aim to create the fistula around 6 months before the anticipated start of dialysis to allow for maturation. When deciding on timing, take into account the possibility of the first fistula failing or needing further interventions before use.

Offer ultrasound scanning to determine vascular access sites for creating arteriovenous fistulae for HDF or HD.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Interventional procedures

NICE has published guidance on laparoscopic insertion of a peritoneal dialysis catheter with **normal arrangements** for clinical governance, consent and audit.

NICE has published guidance on percutaneous endovascular forearm arteriovenous fistula creation for haemodialysis access with **special arrangements** for clinical governance, consent and audit or research.

8 When to start treatment

Consider starting dialysis when indicated by the impact of symptoms of uraemia on daily living, biochemical measures or uncontrollable fluid overload, or at an eGFR of around 5 to 7 ml/min/ 1.73 m^2 if there are no symptoms.

Ensure the decision to start dialysis is made jointly by the person (or, where appropriate, their family members or carers) and their healthcare team.

Before starting dialysis in response to symptoms, be aware that some symptoms may be caused by non-renal conditions.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

9 Coordinating and delivering care

Coordinate care to reduce its effect on day-to-day life and wellbeing (treatment burden). For example, take account of people's preferences and avoid scheduling appointments on non-dialysis days for people on hospital dialysis wherever possible.

Follow NICE's recommendations on:

- delivering an approach to care that takes account of multimorbidity, and
- continuity of care and relationships in adult NHS services, and enabling adults to actively participate in their NHS care.

See the recommendations on continuity and coordination of care in the NICE Pathway on babies, children and young people's experience of healthcare.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

10 Diet and fluids

Offer a full dietary assessment by a specialist renal dietitian to people starting dialysis or conservative management. This should include:

- weight history
- fluid intake
- sodium
- potassium
- phosphate
- protein
- calories
- micronutrients (vitamins and minerals).

After transplantation offer dietary advice by a healthcare professional with training and skills in this area.

Re-assess dietary management and fluid allowance when:

- a person's circumstances change (for example, when switching RRT modality), or
- biochemical measures or body composition measures (for example, unintentional weight loss) indicate, or
- the person (or, where appropriate, their family members or carers) asks.

Provide individualised information, advice and ongoing support on dietary management and fluid allowance to the person and their family members or carers (as appropriate). The information should be in an accessible format and be sensitive to the person's cultural needs and beliefs.

Follow NICE's recommendations on dietary management in children and young people, dietary management in adults, phosphate binder management in children and young people and phosphate binder management in adults for people with hyperphosphataemia in stage 4 or 5 chronic kidney disease.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Multiple frequency bioimpedance devices to guide fluid management

The following recommendations are from NICE diagnostics guidance on multiple frequency bioimpedance devices to guide fluid management in people with chronic kidney disease having dialysis.

There is currently not enough evidence to recommend the routine adoption of the BCM – Body Composition Monitor to guide fluid management in people with chronic kidney disease having dialysis in the NHS. Further research is recommended to show the effect of using the BCM – Body Composition Monitor on clinical outcomes (see section 6.1 of the guidance).

Centres that are currently using the BCM – Body Composition Monitor to guide fluid management are encouraged to take part in research and data collection (see section 5.18 of the guidance).

Centres that do not currently use the BCM – Body Composition Monitor to guide fluid management should only do so as part of a research study, such as the BISTRO trial.

NICE will support this guidance through a range of activities to promote the recommendations for further research (see section 7 of the guidance).

There is currently not enough validation or clinical-outcome data to recommend the routine adoption of the InBody S10 or the MultiScan 5000 to guide fluid management in people with chronic kidney disease having dialysis in the NHS.

11 Managing symptoms

Recognise that people on RRT or receiving conservative management may have the symptoms in possible symptoms in people on renal replacement therapy or conservative management [See page 21] and that these may affect their day-to-day life.

Throughout the course of RRT and conservative management:

- Ask people about any symptoms they have.
- Explore whether symptoms are due to the renal condition, treatment or another cause.
- Explain the likely cause of the symptoms and how well treatment may be expected to control them.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Interventional procedures

NICE has published guidance that electrical stimulation to improve muscle strength in chronic respiratory conditions, chronic heart failure and chronic kidney disease should only be used with standard arrangements or in the context of research (see guidance for details).

12 Secondary hyperparathyroidism

Cinacalcet

The following recommendations are from NICE technology appraisal guidance on cinacalcet for the treatment of secondary hyperparathyroidism in patients with end-stage renal disease on maintenance dialysis therapy.

Cinacalcet is not recommended for the routine treatment of secondary hyperparathyroidism in patients with end-stage renal disease on maintenance dialysis therapy.

Cinacalcet is recommended for the treatment of refractory secondary hyperparathyroidism in

patients with end-stage renal disease (including those with calciphylaxis) only in those:

- who have 'very uncontrolled' plasma levels of intact parathyroid hormone (defined as greater than 85 pmol/litre [800 pg/ml]) that are refractory to standard therapy, and a normal or high adjusted serum calcium level, **and**
- in whom surgical parathyroidectomy is contraindicated, in that the risks of surgery are considered to outweigh the benefits.

Response to treatment should be monitored regularly and treatment should be continued only if a reduction in the plasma levels of intact parathyroid hormone of 30% or more is seen within 4 months of treatment, including dose escalation as appropriate.

NICE has written information for the public on cinacalcet.

Etelcalcetide

The following recommendations are from NICE technology appraisal guidance on etelcalcetide for treating secondary hyperparathyroidism.

Etelcalcetide is recommended as an option for treating secondary hyperparathyroidism in adults with chronic kidney disease on haemodialysis, only if:

- treatment with a calcimimetic is indicated but cinacalcet is not suitable and
- the company provides etelcalcetide with the discount agreed in the patient access scheme.

This guidance is not intended to affect the position of patients whose treatment with etelcalcetide was started within the NHS before this guidance was published. Treatment of those patients may continue without change to whatever funding arrangements were in place for them before this guidance was published until they and their NHS clinician consider it appropriate to stop.

NICE has written information for the public on etelcalcetide.

13 Switching or stopping treatment

Offer information on all medically appropriate treatment options when discussing switching RRT modality.

Consider switching treatment modality or stopping RRT if medically indicated or if the person

(or, where appropriate, their family members or carers) asks.

Plan switching treatment modality or stopping RRT in advance wherever possible.

Do not routinely switch people on peritoneal dialysis to a different treatment modality in anticipation of potential future complications such as encapsulating peritoneal sclerosis. However, monitor risk factors, such as loss of ultrafiltration.

Seek specialist advice on the need for switching treatment modality when women become pregnant or wish to become pregnant. (See the NICE Pathway on intrapartum care for women with kidney disease.)

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

14 Back to managing chronic kidney disease in children and young people

See Chronic kidney disease / Managing chronic kidney disease in children and young people

15 Back to managing chronic kidney disease in adults

See Chronic kidney disease / Managing chronic kidney disease in adults

Information about treatments and how they may affect lifestyle

Information about treatments*	Information about how treatments may affect lifestyle
• What they involve, for example, availability of assistance, time that treatment takes place, and number of sessions per day/week • Potential benefits • The benefits of adherence to treatment regimens and the potential consequences of non-adherence • Potential adverse effects, their severity and how they may be managed • The likely prognosis on dialysis, after transplant or with conservative management • The transplant listing process (when appropriate) • Switching the modality of RRT and the possible consequences (that is, the impact on the person's life or how this may affect future treatment or outcomes) • Reviewing treatment decisions • Stopping treatment and planning end of life care	• The person or carer's ability to carry out and adjust the treatment themselves • The possible impact of dietary management and management of fluid allowance • How treatment may fit in with daily activities such as work, school, hobbies, family commitments and travel for work or leisure • How treatment may affect sexual function, fertility and family planning • Opportunities to maintain social interaction • How treatment may affect body image • How treatment may affect physical activity (for example, whether contact sports should be avoided after transplantation, whether swimming should be avoided with peritoneal dialysis) • Whether a person's home will need to be modified to accommodate treatment • How much time and travel treatment or training will involve • The availability of transport • The flexibility of the treatment regimen • Whether any additional support or services might be needed
*Treatments include RRT, conservative management and dietary intervention.	

Possible symptoms in people on renal replacement therapy or conservative management

Category	Symptom
General	Breathlessness
	Fatigue
	Insomnia
	Itching
	Lethargy
	Pain
	Poor appetite
	Swelling
	Taste changes
	Thirst
	Weakness
	Weight loss/gain
Gastro-intestinal/urological	Abdominal cramps

	Change in bowel or urinary habits
	Nausea
Musculoskeletal	Muscle cramps
	Restless legs
Neurological	Cognitive impairment
	Dizziness
	Headaches
Psychological/behavioural	Anxiety
	Body image concerns
	Depression
	Mood disturbances/fluctuations
	Sexual dysfunction

Glossary

APD

automated peritoneal dialysis

CAPD

continuous ambulatory peritoneal dialysis

eGFR

estimated glomerular filtration rate (without indicating the method of estimation)

HD

haemodialysis

HDF

haemodiafiltration

RRT

(renal replacement therapy encompasses life-supporting treatments for severe acute kidney injury or stage 5 chronic kidney disease, including haemodialysis, haemofiltration, haemodiafiltration, peritoneal dialysis and kidney transplantation)

Sources

Renal replacement therapy and conservative management (2018) NICE guideline NG107

Immunosuppressive therapy for kidney transplant in children and young people (2017) NICE technology appraisal guidance 482

Immunosuppressive therapy for kidney transplant in adults (2017) NICE technology appraisal guidance 481

Etelcalcetide for treating secondary hyperparathyroidism (2017) NICE technology appraisal guidance 448

Machine perfusion systems and cold static storage of kidneys from deceased donors (2009) NICE technology appraisal guidance 165

Cinacalcet for the treatment of secondary hyperparathyroidism in patients with end-stage renal disease on maintenance dialysis therapy (2007) NICE technology appraisal guidance 117

Multiple frequency bioimpedance devices to guide fluid management in people with chronic kidney disease having dialysis (2017) NICE diagnostics guidance 29

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to

make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.