IPILIMUMAB (Yervoy) NIVOLUMAB (Opdivo)

INDICATION (ICD10) C45.9

Check the most recent Blueteq eligibility criteria before prescribing. Blueteq registration required. (www.england.nhs.uk/publication/national-cancer-drugs-fund-list/) (NIV20)

1. For treatment of unresectable malignant mesothelioma previously untreated with any systemic therapy. No known brain metastases or if the patient has brain metastases, the patient is symptomatically stable prior to starting nivolumab in combination with ipilimumab. PS 0 or 1. (TA818)

REGIMEN

Cycles (odd number cycles)

Day 1	NIVOLUMAB	360mg in 100ml sodium chloride IV infusion over 30 minutes
	IPILIMUMAB	1mg/kg in 50ml sodium chloride IV infusion over 30 minutes

Cycles (even number cycles)

Day 1	NIVOLUMAB	360mg in 100ml sodium chloride IV infusion over 30 minutes

NB if nivolumab is discontinued because of toxicity, ipilimumab must also be stopped.
if ipilimumab is discontinued because of toxicity, nivolumab can be continued as monotherapy.

CYCLE FREQUENCY AND NUMBER OF CYCLES

Every 21 days up to maximum 2 years.
A first formal medical review as to whether treatment with nivolumab in combination with ipilimumab should continue or not will be scheduled to occur at least by the end of the first 6 weeks of treatment.

ANTI-EMETICS

None required

CONCURRENT MEDICATION REQUIRED

None required

EXTRAVASATION AND TYPE OF LINE / FILTERS

Ipilimumab - neutral
Nivolumab - neutral

Use low protein binding 0.2 to 5micron in-line or add-on filter.
Peripheral or central line

INVESTIGATIONS

Blood results required before SACT administration
FBC, U&E and LFTs every cycle
Neutrophils x 10^9/L ≥1.5
Platelets x 10^9/L ≥100
Thyroid function baseline, then every cycle
Random cortisol baseline, then every cycle
Random glucose every cycle
Baseline weight and every cycle

MAIN TOXICITES AND ADVERSE REACTIONS

Ipilimumab	Immune related toxicities - pneumonitis, colitis or hepatitis etc
Nivolumab	Immune related toxicities - pneumonitis, colitis or hepatitis etc

INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS
(not exhaustive list check SPC/BNF/Stockleys)

Ipilimumab	Corticosteroids Anticoagulants
Nivolumab	-

DOSE MODIFICATIONS
Non-haematological
Ipilimumab Nivolumab
Immune-related adverse reactions - refer to TV immune-oncology agent immune related adverse event clinical guideline

Hepatic impairment
Ipilimumab
ALT/AST ≥5xULN or bilirubin >3xULN at baseline, use ipilimumab only with caution.

Nivolumab
Data from patients with moderate or severe hepatic impairment are too limited to draw conclusions. Nivolumab should be administered with caution in patients with moderate or severe hepatic impairment i.e bilirubin >1.5xULN and any AST.

Renal impairment
Ipilimumab
Data from patients with severe renal impairment (CrCl <30ml/min) are too limited to draw conclusions.

Nivolumab
Data from patients with severe renal impairment (CrCl <30ml/min) are too limited to draw conclusions.

REFERENCES
1. CDF