

Supplementary Figure 1. Flowchart of the process of identifying and selecting included studies. The grey boxes indicate the stage of the selection process; n denotes the number of articles included at each stage of the process.

Supplementary Table 1. Data extracted from Study Design								Base	eline Characteristics										Resul	ts					
Reference Authors/ year number Study drug(s) Study design - Reported	- Inclusion Criteria	Exclusion Criteria	Patient enrollmen	nt Drug, dosage, injection frequency and other therapeutic interventions (including description of parameters used for defining schedule of treatment)	Treatment Regimen (fixed, PRN, T&E etc.)	Mean/ SD age of patients (yr)	Gender ratio (Female %)	Previous anti-VEGF treatmen response	nts/ Baseline CNV lesion type (%)	Baseline central retinal thickness (CRT) (μm)	Baseline visual acuity LogMAR letters; (Mean / SD)	Sample size (patients)	Sample size Follow (eyes) durati	up Number of intravitreal injections on administered (mean/median/SD)		ts Mean BCVA gain (SD) at 12 months (logMAR letters)	Percentage of patients with >15 letters gained or lost at 12 months	gain (SD) at	Percentage of patients with >15 letters gained or lost at 24 months	longer than 24	lost at timenoints longer	Proportion of eyes with 6/12 (70 logMAR letters) o better vision at Baseline and 1 year, 2 years, 3 years study end	· Vision related Change ir QoL (μm , (mean/med	(at follow up	Adverse events y (Intraocular inflammation: uveitis, vitritis, vasculitis, endophthalmitis. Raised IOP. Cardiovascular events)
1 Gupta et al. 2011 Ranibizumab Retrospective		AMD, (2) lesions previously treated with laser photocoagulation, intravitreal triamcinolone,	er 2010 and earlier	Ranibizumab (0.5mg/0.05ml) using either loading dose or PRN; Both loading dose and PRN groups received intravitreal ranibizumab at baseline. Loading dose received 2 further consecutive monthly ranibizumab independent of clinical findings, then further injections were determined by the same re-treatment criteria as patients on PRN schedule from baseline. 1 month was defined as an interval of 30 +/- 10 days	PRN with and withou loading	t Loading dose group: 81.4 ± 5.9; PRN group: 81.9 ± 6.0	64.1% overall. 66.0% in loading dose group. 61.3% in PRN group.	None	LD regimen - classic/predominantly classic 27.66%, minimally classic 21.28%, occult 51.06%. PRN regimen - classic/predominantly classic 16.13%, minimally classic 32.26%. Occult 51.61%	NR	LD group: 48 ± 15.3, PRN group 44.5 ± 15.4	78	78 > 1 ye	LD group 6.0, ar PRN group - 4.5	NR	LD group 4.4, PRN group 4.0	LD group 29.8%, PRN group 12.9%.	NR	NR	NR	NR	NR	NR LD group - PRN group		1 patient developed acute anterior uveitis. 0 endophthalmitis.
2 Kumar et al. 2011 Ranibizumab Prospective	 2. BCVA >=25 letters 3. nAMD lesions, any component of which extended to with 200 µm of foveal center 4. Signs of presumed recent disease progression in cases with occult or minimally classic lesions, as defined by recent loss of vision, new hemorrhage and/or an increase in lesion size on fluorescein angiography. 	Nil	2010 and earlier	the decision to retreat was based on individual clinician's judgement. Retreatment was considered if there was any deterioration in the signs and symptoms including drop in BCVA (5 19 letters from baseline), worsening of IRF or SRF, fresh hemorrhage or extension of lesion of the signs and symptoms including the signs and symptoms a	ioto on ; PRN ent	79.5 (range 61-95)	60.4%	None	Classic no occult 34%, predominantly classic 22%, minimally classic with occult 9%, minimally classic without occult 4%, occult no classic 19%, RAP 12%		49.5 (13.4)	81	81 1 yea	Mean 5.6 (2.3)	NR	3.7 (10.8)	>=15 letters BCVA gained: 17.1% >15 letters BCVA lost: 2.5%	NR	NR	NR	NR	NR	Mean CF months 231 NR at 6 months (102), at 12 246µm (1	m (80), 248µm NR nonths	1 patient had raised IOP.
3 Shona et al. 2011 Ranibizumab Retrospective	 Initiated on ranibizumab with at least 12-month follow-up To initiate ranibizumab: VA requirements of 24–73 logMAR letters with demonstrable disease progression and no central irreversible structural damage. All lesion subtypes with lesion size of 12 disc areas or less were included. 	 Patients with choroidal neovascularization secondary to causes other than AMD Lesions previously treated with laser photo coagulation, intravitreal triamcinolone, intravitreal bevacizumab or photodynamic therapy 	to 2010 and earlier	All patients received a loading dose of 3 consecutive monthly ranibizumab injections; criteria for retreatment were persistence or recurrence of any SRF/IRF on OCT in a previously dry macu increase or new SRF/IRF on OCT, decrease of 5 letters in VA associated with fluid on OCT, ne subretinal or intraretinal hemorrhage and/or angiographic evidence of increase in lesion size.	ıla, PRN ew	Poor: 82.2 (9.2) Intermediate: 82.9 (5.5) Good: 79.9 (8.0)	Poor: 59.3% Intermediate: 60.6% Good: 59.3%	None	Poor: occult 41%, minimally classic 26%, classic 33%; Intermediate: occult 39%, minimally classic 9%, classic 52% Good: occult 56%, minimally classic 18%, classic 26%	, NR	Poor: 28.9 (4.7) Intermediate: 43.8 (4.7) Good: 61.7 (61.7)	87	87 1 yea	12 months: Overall: 5.7 Poor: 5.3 Intermediate: 6.12 Good: 5.70	NR	Poor: 14.0 Intermediate: 7.1 Good: 2.9	Gain >15 letters Poor: 45% Intermediate: 30% Good: 15% loss>15 letters Poor: 4% Intermediate: 5% Good: 4%	NR	NR	NR	NR	NR	Mean CMT at 12 mo NR Poor: -13 Intermediate Good: -4	ths: pµm NR -49 µm	No case of endophthalmitis, retinal detachment or acute inflammation.
4 Pushpoth et al. 2012 Ranibizumab Retrospective	Meet eligibility criteria as per the Royal College of Ophthalmologists Guidelines	Nil	2007 to 2009	Treatment strategy following ProNTO guidelines. There were 3 loading doses of ranibizumab followed by monthly follow-up. Any patients who showed signs of disease activity were advise to have further treatment. Disease activity defined as one/more of: any fluid as detected by OC (if the profile of the fluid spaces had not altered for 3 visits in the second or more years of follow up then treatment might be missed), retinal hemorrhage or reported distortion.	ed CT PRN	75±8.4			181) alysis Majority (59.76%) had occult choroidal neovascularisation, 28.55% had minimal or predominantly classic and 11.69% retinal angiomatous proliferation	NR	Group 2 - 54.1 ± 15.3	1017	1086 4 year	Group 2: 12 months: 5.2 ± 2.7; 24 mont 8.3 ± 3.7; 36 months 10.8 ± 5.8; 48 mont 12.8 ± 7.8		Group 2: 3.8	Group 2: Gain: 20.1% Loss: 9.5%	Group 2: 2.4	Group 2: Gain: 20.1% Loss: 14.6%	Group 2 BCVA at 36 months = 54.3 ± 18.1; at 48 months = 58.7 ± 17.2	36 months - Group 2: Gain: 18.1% Loss: 18.8%	Group 1 and 2 Baseline: 6.4% >75 letters Year 1: 31.3% >75 letters Year 2: 17.2% >75 letters Year 3: 12.7% > 75 letters Year 4: 14.6% > 75 letters	NR NR	NR	4 cases of presumed endophthalmitis from 1086 eyes.
5 Muniraju et al. 2013 Ranibizumab Retrospective	Consecutive patients with nAMD who were initiated on ranibizumab therapy were identified from the ranibizumab in NV-AMD database. Eyes with subfoveal choroidal neovascularization secondary to AMD of any lesion subtype with lesion size of less than 12 disc areas with no permanent central damage and baseline VA between 24 and 73 logMAR letters were included.	Patients with choroidal neovascularization secondary to causes other than AMD, lesions previously treated with laser photocoagulation intravitreal triamcinolone, intravitreal bevacizumab or photodynamic therapy and patients who did not complete the 3-year follow-up.	ns on, 2008 to 2010 d	The loading dose of 0.5 mg ranibizumab during 3 consecutive months was mandated. Further injections were given if the retreatment criteria were met and at the discretion of the treating clinician. Criteria for retreatment were mainly based on findings detected on OCT, including persistence, increase or new SRF and intraretinal oedema on OCT, decrease in VA associate with fluid on OCT, and subretinal or intraretinal hemorrhage. If the clinician decided to discontine treatment, the patient was followed up as required and not monthly. Discontinuation criteria included continuous deterioration or no improvement in VA compared to baseline at the 6-mont follow-up, persistent subretinal and/or intraretinal fluid with no response to treatment or evidence of subfoveal structural damage on OCT and at the discretion of the treating physician.	ed ue PRN th	82.7 (range 55–97)	67%	None	NR	NR	48.2 (16.9)	156	174 > 3 yea	Mean: Year 1: 4.8 (2.2) Total by end of Year 2: 7.8 (4.2) (2.9 injections in 2nd year) Total by end of Year 3: 10.2 (6.2) (2.4 injections in 3rd year)	INK	3	Gain: 20.1% Loss: 9.8%	2.2	Gain: 20.7% Loss: 14.4%	NR	36 months: Gain: 19% Loss: 19%	NR	NR NR	NR	NR
6 Tan et al. 2013 Ranibizumab Retrospective	Included patients with nAMD of all lesion subtypes who had not previously received treatment and who completed at least 12 months of follow-up and where there was recordable BCVA at baseline, and months 3, 6, 9 and 12.	Excluded patients whose treatment was terminated prematurely due to side-effects, other systemic co-morbidities, and patient choice	, 2007 to 2000	Each patient received an initial set of 3 ranibizumab 0.5 mg injections at monthly intervals. Subsequent injections were given if indicated based on clinical finding of worsening BCVA and OCT findings of persistent hemorrhage or fluid. Where treatment was not warranted, patients were reviewed at clinic at 1 to 2 month intervals.		78.5 (7.0)	67.6%	None	NR	NR	NR	71	71 > 1 ye	ar Mean 5.4 (1.9)	NR	0.3	Gain: 15.0%	NR	NR	NR	NR	Baseline: 9.8% Year 1: 22.5%	NR NR	NR	NR
7 Ross et al. 2013 Ranibizumab Prospective	presenting VA of 23 or more letters, treated within a large public hospital serving a geographically defined area of the United Kingdom	laser therapy, or gas injections for nAMD,	2007 to 2010	Loading phase of 3 consecutive monthly injections. Retreatment with ranibizumab was performed if any of the following criteria was fulfilled in subsequent monthly assessments: >20 increase in central 1mm retinal thickness since last visit on OCT, presence or qualitative increase in the amount of intraretinal/subretinal fluid on OCT, or appearance of new macular hemorrhage on fundal examination with or without a decrease in VA. If the intraretinal fluid or subretinal fluid persisted despite numerous injections, then treatment was stopped but was restarted if there was a qualitative deterioration.	PRN	Median = 82.3 (IQR 76.9 - 86.3)	66.3%	None	70.9% minimally classic/occult no classic CNV, 27.8% classic no occult/predominantly classic CNV, 1.2% FFA unassessable/not performed	353 µm + 102	54.4 ± 14.2	406	406 > 1 ye	First year = 5.9 (range 3-13), Second ye 3.6 (range 0-10)	ear = First year = 12.2 (range 7-14); Second year = 10 (range 4-13)	4 1 + 14 2	NR	1.6 ±17.6	NR	NR	NR	NR	NR Year 1 = - Year 2 = -		2 endophthalmitis cases (rate of 1 in every 1828 injections; 1 in every 203 eyes)
8 Chavan et al. 2014 Ranibizumab Retrospective	Confirmation of nAMD was based on presence of drusen or age-related changes in the retinal epithelium on OCT and late-phase leakage on FA of subfoveal choroidal neovascularization with either classic, occult, or retinal angiomatous proliferative components. Eyes with nAMD and visual acuity of 6/12 to 6/96 were considered to satisfy the NICE guidance criteria	they had no follow-up after baseline injection or were recruited into a clinical trial. Eyes were excluded if they had any photodynamic therapy (PDT), lesions secondary to non- AMD causes, serious detachments of pigmen	n ic 2009 ent	Loading dose of 3 injections followed by retreatment on a PRN basis. Using a 2-stop model, repeat injections were scheduled shortly after monitoring visits if lesions were found to be active As much as possible, monitoring visits were scheduled every month. Retreatment decision was OCT-guided and was performed until no further reduction in intra or SRF could be achieved. I accordance with retreatment protocols used in earlier ranibizumab PRN studies such as the PRONTO study, we did not specifically continue repeat injections to attempt to resolve PEDs which were not associated with presence of subretinal or IRF on OCT. Patients could be discharged from follow-up in the treatment program if they had not required retreatment in over 12 months or if it was felt that benefit could not be gained due to extensive macular damage.	re. as in PRN s er	81.8±6.7 (range: 65–95)	62.5%	None	Occult 56%, classic containing 38%, and RAP 6%	423 μm ± 115	Year 1: 52.3±14.7 Year 2: 52.4±14.6 Year 3: 52.9±14.6	117	130 3 year	Mean (range) Year 1: 5.9 (1–11) Year 2: 4.1 (0–10) yr 3: 4.21 (0–11)	Mean (range) Year 1: 12.3 (7–1 Year 2: 10.6 (3–1 Year 3: 11.5 (1–1	18) 18) 1 24145 24	Gain: 13%	-2.4±17.4	Gain: 12.3%	Year 3: -1.7±17.8	Gain: 16.8%	Note values relate to >75 logMAR letters Baseline: 3.3% Year 1: 6.7% Year 2: 7.9% Year 3: 10.1%	Mean C Year 1: 325 Year 2: 331 Year 3: 325	m ±79, m ±88, NR	NR
9 UK AMD EMR. 2014 Ranibizumab Retrospective	1. Treatment-naïve 2. Treated with ranibizumab for nAMD	1. Treatment with combined therapy or bevacizumab at any time point	2012 and earlier		PRN	79.7 (median 81; range 55-108) (IQR 75-85)	63%	None	NR	NR	55	11135	12951 3 year	Year 1: 5.7 (median 6, range 1-13) Year 2: 3.7 (median 4, range 0-13) Year 3: 3.7 (median 4, range 0-12)		2	Available graphically	1 <i>A</i>	Available graphically	Year 3: -2	Available graphically	NR	NR NR	NR	NR
10 Basheer et al. 2015 Ranibizumab Prospective	5. Presence in study eye of previously untreated	 Previous treatment Transferred to another trust Subsequently had another diagnosis (dropped from analysis) Received no more than three treatments in the loading phase (dropped from analysis) 	2007 to 2012	Loading phase of 3 Ranibizumab 0.5mg monthly injections (all patients) Following this, patients were monitored monthly and the following retreatment criteria were used to establish whether further treatment was required: Loss of letters with fluid on OCT; any fluid on OCT – intraretinal fluid, subretinal fluid; Increased size of pigment epithelial detachment; ne retinal hemorrhage; new CNVM. In addition, if FFA revealed active CNVM, treatment was repeated each month for three months. Treatment was further individualized by sequentially lengthening follow-up intervals when a period of stability had been established.	d w PRN	83	49%	None	NR	NR	35	106	123 2 year	0-12 months: 6 (range 3 to 12) 12-24 months: 4 (range 1 to 12)	NR Year 1: 7.8±3.3,	3.5	Loss <15 letters: 91.8% Gain >=15 letters: 20.3% Loss >15 letters: 8.1%	3	Loss <15 letters: 88.6% Gain >=15 letters: 19.7% Loss >15 letters: 11.5%	NR	NR	NR	NR NR	NR	NR
11 Borooah et al. 2015 Ranibizumab Retrospective	Patients were enrolled if they had started treatment	Patients who had previously been treated with photodynamic therapy were excluded in orde to compare outcomes to those of the clinical trials.	er 2007 to 2008	The normal treatment regimen in the clinic initially involved 3 ranibizumab monthly treatments. Patients were then followed-up on a 4–8 weekly basis. Retreatment was administered if there was recurrence noted on clinical examination or OCT.	PRN	76.5	60%	NR	Pure classic 9.6%, predominantly classic 16.4%, minimally classic 8.7%, occult 36.5%, RAP 24.0%	NR	0.58 +/- 0.28	96	104 Mean > years		Vear 2: 1 8+3 1	i, , NR 5,	NR	NR	NR	NR	Over mean follow-up of 4 years and 1 month. 9.6% gained ≥15 letters 24.0% lost ≥ 15 letters	NR	NR NR	NR	1 vitreous hemorrhage, 0 endophthalmitis, 1 corneal abrasion
12 Williams et al. 2015 Ranibizumab Prospective	1. Receiving ranibizumab for nAMD of all types for 12 or more months at the unit	 Alternate diagnoses Received prior photodynamic therapy 	From 2007	"The policy in our department is not to vary appointment times based on patient response unt the second year of treatment".	^{iil} PRN	NR	NR	None	NR	NR	53	708	805 1 yea	First year: 5.9	NR	4.6	NR For eyes with a	NR	NR	NR		NR	NR NR	NR	NR 8 eyes (0.5%): Endophthalmitis
13 Buckle et al. 2016 Ranibizumab Prospective		Exclusion criteria included: prior treatment with ranibizumab or bevacizumab privately, prior or concurrent photodynamic therapy, VA<23 logMAR letters at baseline, and failure to complete the loading phase of injections.	, 2007 to 2013	PRN treatment posology after an initial loading phase of 3 ranibizumab injections at monthly intervals. Patients are followed up at monthly intervals with SD OCT and fundal examination ur no injections have been required to either eye for 6 months, after which follow-up intervals are gradually extended. If no injections have been required for 1 year patients are discharged and advised to return if they notice any new symptoms of blurring or distortion of vision in either eye	ntil e PRN d	82.5	64.9%	None	NR	327 μm	56.6	1'278	1'483 < 5 yea	Mean Year 1: 6.0; Year 2: 3.2; Year 3: 2 Year 4: 2.3; Year 5: 1.5	2.8; Median number of hospital visits pe patient completing year 1 was 14 and in years 2, 3, 4 and 5 the median was 13 visits each year	er ng nd NR nd Is	baseline VA of ≤70 logMAR letters, 15 letter gain was achieved by 184 (16.8%) eyes. For all eyes, there was 15 letter loss in 126 (9.7%) eyes.	NR	For eyes with a baseline VA of ≤70 logMAR letters, gain was achieved by 137 (18.8%) For all eyes, there was 15 letter loss in 111 (12.9%) eyes	NR	For eyes with a baseline VA of ≤70 logMAR letters, gain >15 letters was achieved by 70 (15.9%), 39 (15.5%) and 8 (8.2%) eyes in yr 3–5, respectively. Loss of >15 letters: Year 3 107 (21.1%); Year 4 64 (22.4%); Year 5 30 (27.5%)	Baseline: 16.9% Year 1: 17.0% Year 2: 15.9% Year 3: 15.6% Year 4: 14.9%	NR Vere 261, 2 248 and 2 respecti	4 and 5 7, 257, 8 µm, NR	A total of 16 993 injections were administered to the 1483 eyes which provides an estimate of the endophthalmitis rate per injection of 1 in 2124 injections. Subconjunctival hemorrhage (31 eyes; 2.1%) IOP >21 mm Hg (40 eyes; 2.7%), subconjunctival hemorrhage (31 eyes; 2.1%) and corneal epithelial abrasion (26 eyes; 1.8%)
14 Razi et al. 2016 Ranibizumab Retrospective		 wAMD had previously been treated with alternative therapies (e.g., PDT, anti-VEGF) Received ranibizumab for other diagnoses Did not complete the 3-year follow-up period) es NR	Ranibizumab 0.5 mg on a monthly basis for 3 consecutive months. After the 3rd mandatory injection, patients were followed up as outpatients once a month, throughout the 3-year follow-to period. Patients received further injections PRN if retreatment criteria were met or at the discretion of the treating clinician.	^{up} PRN	81.9 (range 61-93)	53%	None	Occult 57%, minimally classic 26%, predominantly classic 17%	NR	37.3 (range 4 to 68)	70	76 3 year	Year 1: 5.6 (range 3 to 9), Year 2: 3.5 (range 0 to 8), Year 3: 3.5 (range 0 to 10)	NR	NR	>=15 letters gained: 34%	NR	>=15 letters gained: 30%	36 months: 5.3 letters	36 months: >=15 letters gain: 29% >15 letters loss: 8%	NR	NR NR	NR	None
15 Talks et al. Aflibercept Retrospective	Treatment-naïve eyes in which aflibercept treatment with a minimum of 1 year of follow-up	Nil	2013 to 2015	Use of aflibercept following the VIEW protocol; 3 injections 1 month apart and then 2 monthly for the first year.	or Fixed	80.0 (8.3)	63%	None	NR	NR	53.7 (SE: 0.4)	1682	1840 1 yea	Mean: 7	Mean: 7.3	5.1 nd	Gain: 18% Loss: 8%	NR	NR	NR	NR	Baseline: 16.4% Year 1: 33.7%	NR NR	NR At month 11, 136	NR
16 Almuhtaseb et Aflibercept Retrospective	Patients were treatment naïve diagnosed with neovascular age-related macular degeneration (nAMD) who received aflibercept over 1 year per the VIEW 1 and VIEW 2 Clinical Trials' protocol.	Nil	NR	Aflibercept over 1 year as per the VIEW 1 and VIEW 2 Clinical Trials' protocol; 3 consecutive monthly aflibercept intravitreal injections (Q4W) followed by continuous bimonthly fixed-intervadosing injections for the rest of year 1 (Q8W).	al Fixed	82	72%	None	NR	311 µm	52 (range 25 to 70)	223	255 1 yea	Mean: 7	2 follow up clinicia visits with fixed injection appointments in year 1.	1 8 n	NR	NR	NR	NR	NR	NR		t month (53%) were inac t month (dry), whereas 1	ive 19 NR
17 Almuhtaseb et al. 2017b Aflibercept Retrospective	treatment for nAMD with aflibercept, received	Results from eyes whose treatment did not follow the VIEW protocol during year 1 were excluded.	-	Eyes following the VIEW protocol during year 1 were defined as eyes having received 7 or 8 injections in the time period up to and including wk 56 (from baseline injection). Results from eye whose treatment did not follow the VIEW protocol during year 1 was excluded. Eyes were stratified empirically according to the number of injections received in the 2nd year into 3 different groups, which are as follows: Group A, 0–3; Group B, 4–5, Group C, 6 or more.	Year 1: Fixed Year 2: Variable,	82	68%	None	NR	NR	56.3	1'083	1'180 2 year	Mean 3.7 in the 2nd year	NR	Not included in the 12 month analysis to avoid duplication of data. Mean gain in VA = 5 letters		2.8	NR	NR	NR	NR	NR NR	NR	NR
18a Lee et al. 2017 Ranibizumab Retrospective	Treatment naive eyes with the diagnosis of nAMD. The eyes were required to have at least 1 year of follow-up data as well as treatment monotherapy with either ranibizumab or aflibercept.	Nil	Mean year starting treatment 2013		Ranibizumab: PRN	NR	63.5%	None	NR	NR	55.0 (15.6)	942	942 1 yea	Ranibizumab: 5.8	Ranibizumab: 10.	0.8 Ranibizumab: 1.6 (95% CI 0.5 to 2.7)	NR	NR	NR	NR	NR	NR	NR NR	NR	NR
18b Lee et al. 2017 Aflibercept Retrospective	Treatment naive eyes with the diagnosis of nAMD. The eyes were required to have at least 1 year of follow-up data as well as treatment monotherapy with either ranibizumab or aflibercept.	Nil	Mean year starting treatment 2014		Aflibercept: Fixed or T&E	NR	63.5%	None	NR	NR	54.9 (16.0)	942	942 1 yea	Aflibercept: 7.0	Aflibercept: 8.9	Aflibercept: 6.1 (95% CI 5.1 to 7.1)	⁶ NR	NR	NR	NR	NR	NR	NR NR	NR	NR
19 Vardarinos et al. 2017 Ranibizumab Retrospective	For newly diagnosed patients diagnosed with nAMD who were offered ranibizumab	Nil	2013 to 2014	Monthly injections, every 28 days until a dry macula was evident on SD-OCT. Once that was achieved, the injections continued, incrementally increasing the treatment intervals by 2 week until a maximum interval of 12 weeks provided there were no signs of recurrence of disease activity on SD-OCT or BCVA loss of more than 5 letters which could not be explained by other ophthalmic conditions. In case of a recurrence the treatment interval was reduced by 2 weeks Signs of disease activity on SD-OCT were considered to be the presence of IRF and/or SRF and/or retinal/sub-retinal hemorrhage. In the 2nd year of treatment, for patients who achieved repeated treatment intervals of 12 weeks and on the review visit, the condition was considered inactive (no IRF or SRF, no hemorrhage, no BCVA loss compared to last visit) the patients we given the option to be placed on a T&E regime, where they would be reviewed with an SD-OC on incrementally increasing intervals (2–3 wk at a time) and would be offered an injection only there was disease recurrence.	s er s. d d tre T	80.9 (8.8)	67%	None	NR	384.6 µm (154.9)	60.5 (8.9)	54	56 > 1 ye	Mean ar 12 months: 7.8 (1.3) 24 months: 12.1 (2.8)	NR	8.3	NR	5.2	NR	NR	NR	NR	NR 1 year: 255 2 year: 245	m (50), NR m (48)	None
	Eligibility criteria: (1) adult patients ≥50 years of age with active choroidal neovascularisation secondary to AMD in one or both eyes at the time of diagnosis; (2) medical records providing at least 12 months of retrospective data on either the ranibizumab PRN regimen prior to switching to T&E (prior PRN cohort), or the T&E regimen (anti-VEGF-naive cohort) immediately prior to enrolment.	(i.e. bevacizumab or aflibercept) other than ranibizumab in the study eye (defined as the	1 2016 to 2017	Two cohorts - (1) those switching from PRN to a TAE regimen ('prior PRN'), (2) initiating TAE a first anti-VEGF therapy ('anti-VEGF-naïve'). Only Cohort 2 data included in this analysis. Patients were treated according to routine medical practice and local prescribing information based on the licensed ranibizumab posology. For T&E - this is monthly injection until maximur VA is achieved and/or there are no signs of disease activity (i.e. no change in VA, OCT, and other signs/symptoms of disease).	m T&E	Anti-VEGF-naïve cohort 77.5 (7.6)	Overall 62.5%. Prior PRN cohort = 52.9%. Anti-VEGF-naïve cohort = 65.5%	Prior PRN cohort were excluded this analysis.	NR	Anti-VEGF-naïve cohort: 365 µm (105).		35	35 2 year	Anti-VEGF-naïve cohort: After study enrolment, patients received mean 8.9 (' injections in the period from baseline to months of TAE. Due to the definition o baseline in this cohort as the start date ranibizumab injection, these numbers inc the monthly ranibizumab loading phase, thus may be higher than expected for a regimen.	1.4) 12 Anti-VEGF-naïve cohort: T&E clini visits coincided w injection visits	vith Anti-VEGF-naïve cohort: 7.6 (95%CI:	Gain: 25.9% Loss: 3.7%	NR	NR	NR	NR	NR	NR Anti-VEGF cohort: r change baseline CS 68 µm (95% -29)	ean om NR T was -	NR
21 Ozturk et al. 2018 Aflibercept Retrospective	Receiving aflibercept for nAMD for at least 1 year; treatment naïve eyes	Nil	2016 to 2017	Aflibercept as per "VIEW protocol"	Fixed	7 or less IVI group: 82.6 (7.3); 8 IVI group: 78.8 (7.4)	7 or less group: 57.1%, 8 IVI group: 52.4%	None	For 7 or less IVI group: 47.6% occult, 42.9% minimally classic, 4.8% predominantly classic, 4.8% other; for 8 IVI group: 38.1% occult, 38.1% minimally classic, 23.8% predominantly classic, 0% other	NR	Median: 47.0 (Q1 43.0, Q3 55.0) for 8 IVI group; 57.0 (Q1 50.0, Q3 62.0) for 7 or less IVI group	42	42 > 1 ye	7 or less IVI group: mean 6.6 over 1 yea IVI group - 8.0 over 1 year	ar; 8 NR	2.6 (95% CI -1.8, 7.0) for 7 or less IVI 5.9 (95% CI 1.0, 10.8) for 8 IVI	; NR	NR	NR	NR	NR	NR	NR NR	NR	NR
22 Eleftheriadou et al. 2018 Aflibercept Retrospective	Consecutively treated eyes of patients with nAMD. Treatment naïve eyes receiving intravitreal aflibercept injections.	Any exclusions were recorded using a consolidated standards of reporting trials-like approach to minimise bias.	e 2013 to 2014	nAMD treatment guidance protocol for aflibercept developed by Moorfields Eye Hospital. Thes are similar to guidelines developed by clinicians in the UK and broadly based on using fixed dosing in the first year of treatment followed by a T&E regimen.	-	80.6 ± 8.3	58.90%	None	CNV morphology included a class component 22.5%, purely occult 65.9% Number with classic lesion 7 (9.7%)	351 µm	54.4 ± 16	139	148 3 year	Year 1 = 7.2 ± 1.8; Year 2 = 12 ± 3.8; Y 3= 15.9 ± 6.1	/ear NR	5.9 ± 13.8	Gain: 25% Loss: 6.8%	6.4 ± 14.9	Gain: 28.2% Loss: 9.2%	36 months: 6.6 ± 15.4 gain	Gain: 30.5% Loss: 11.1%	Note values relate to >73 logMAR letters Baseline: 10.8% Year 1: 30.4% Year 2: 38.9% Year 3: 28.7%	NR γear 1 = -7 100; Year μm ± 95; Ye 78 μm ±	= -75 Year 1 = 67%, Ye ar 3 = - = 61%; Year 3 = 0	ar 2 NR 7%
23 Fulcher et al. 2019 Aflibercept Retrospective	Diagnosed with nAMD. Completed 1 year of follow-up.	Insufficient data (missing visits, less than 12 months of data), missed loading dose injections, incorrect diagnosis, the use of different optical coherence tomography (OCT machines across visits, ocular co-morbidities that may impact on results (e.g. uveitis), or treatment with ranibizumab. Patients with controlled glaucoma or ocular hypertension (n = 4) were eligible for inclusion	rT) 2014 to 2016 r	Each eligible eye received three loading dose injections at four-weekly (±1 week) intervals. For the remaining 12-month follow-up period, further injections were administered using a 'treat and extend' protocol, in which injections were given each visit, and follow-ups were determined based on findings from OCT, VA and clinical examination		79 (9)	51%	None	Number with idiopathic polypoidal choroidal vasculopathy (IPCV) and occult lesion 7 (9.7%) Number with minimally classic lesion 9 (12.5%) Number with occult lesion 31 (43.1%) Number with predominantly classic lesion 8 (11.1%) Number with retinal angiomatous proliferation (RAP) lesion 10 (13.9%)	421 µm ± 123	55.4 ± 15.5	69	72 1 yea	7.0 ± 1.4	NR	3.2 ± 13.4	NR	NR	NR	NR	NR	NR	NR 12 months: ± 85	07 μm NR	NR
24 Fasler et al. Ranibizumab, 2019 Aflibercept Retrospective	≥1 ranibizumab or aflibercept injection, entry of 'AMD' in the diagnosis field of the EMR and a minimum of 1 year of follow-up	(1) unknown date of first injection, (2) treatment outside of routine clinical care before the first recorded injection in the database, including pegaptanib, previous lase or photodynamic therapy, bevacizumab	er	Ranibizumab or aflibercept; NR - dosage/frequency	NR	78 (95%CI 77.7-78.3)	61%	None	NR	NR	56.2 (95%Cl 55.6-56.8)	3357	3357 2 year	First year: 7.7 (95%Cl: 7.6-7.8); Over the years: 13.0 (95%Cl: 12.8-13.2)	two NR	5.5 (95%CI 5.0-6.0)) NR	4.9 (95%Cl 4.2- 5.6)	NR	NR	NR	Baseline: 24% Year 1: 42% Year 2: 44%	NR NR	NR	NR
25 Horner et al. 2019 Retrospective	Consecutive, treatment naïve patients with confirmed diagnosis of active nAMD from Jan-Dec 2009. and commenced on anti-VEGF treatment with a full follow- up of eight years	Other causes of choroidal vascular membranes e.g. myopic CNVM or peripapillary CNVM	2009	Standard loading dose of 3 intravitreal injections of 0.5mg ranibizumab at 4 weekly intervals. Retreatment was decided by assessing clinicians based on the evidence of disease activity (presence of intraretinal fluid or subretinal fluid on OCT scans, macular hemorrhage or exudation). All pts were reassessed at 4 weekly intervals for the first 6 months and extended 8 weekly reviews if disease remained inactive.	PRN	Median age of those who completed 8 years follow-up: 72 (IQR 67-76)	For those who completed 8yrs follow- up: 66%	None	NR	NR	Median VA 61.1 (IQR: 46.1-69.9)	86	86 8 year	Median: Year 1: 6; Year 2: 4; Year 3: 4; Year 4: 4; Year 5: 5; Year 6: 4; Year 7: 3; Year	Year r 8: 3 NR	6.9 (12.3)	NR	4.1 (14.3)	ND	3rd year: -0.8 (19.2); 4th year: -0.8 (21.0); 5th year: -1.9 (23.0); 6th year: -3.8 (23.3); 7th year: -6.4 (24.8); 8th year: -9.1 (25.0)	At 8 years: 10.5%	Baseline: 33.4% Year 8: 26.3%	Baseline n CRT = 295 µ NR 254-349). At = 209 µm (10 254)	n (IQR 3 years NR R 182-	NR
26 Chandra et al. Aflibercept Retrospective	e Treatment-naïve patients	If they received any other anti-angiogenic agents at any time point before or after initiation of aflibercept therapy		Aflibercept - injection frequency as per treatment regimen. No other therapeutic interventions Recommended protocol was 3x loading doses followed by 8 weekly fixed dosing until week 40 > then transferred to T&E. When patients are injected at 12 weekly intervals for 3 consecutive patients, they could be referred to a stable AMD retinal clinic where they are monitored at 8-12 weekly intervals> then PRN or combination of T&E/PRN.	e Fixed + T&E	79 ± 8.5	54%	None	NR	NR	58.3 ± 15.4	468	512 5 year	For whole cohort: 1st year = 7.8 (SD 1. 2nd year = 4.9 (SD 2.7), 3rd year = 3.8 (3.1), 4th year = 3.5 (SD 3.1), 5th year = (SD 3.2); For patients who completed 4 y of treatment - 1st year = 7.9 (SD 1.3), 2 year = 5.2 (SD 2.7), 3rd year = 4.1 (SD 3 4th year = 3.7 (SD 3.2), 5th year = 3.2 (3.2)	(SD 3.2 /ears 2nd 3.1),	Whole cohort 5.6 (SD 15.4) vs completers 6.3 (SD 14.3)	, NR	Whole cohort 3.0 (SD 18.3) vs completers 3.9 (SD 18.3)	NR	3rd year: whole cohort 0.3 (SD 20.5) vs completers 1.7 (SD 19.9); 4th year: whole cohort -1.9 (SD 22.7) vs completers -1.2 (SD 22.3); 5th year: whole cohort -2.9 (SD 23.4) vs completers - 2.9 (SD23.4)	NR	Baseline: 32.2% Year 1: 54.4% Year 2: 50.3% Year 3: 44.4% Year 4: 42.6% Year 5: 39.9%	NR NR	NR	NR
Gupta B, Adewo	oyin T, Patel SK, Sivaprasad S. Comparison of two intravitr	eal ranibizumab treatment schedules for neo	ovascular age-related r	macular degeneration. <i>Br J Ophthalmol</i> 2011; 95 (3): 386-390.						<u> </u> 	<u>.</u>	: 						<u> </u>							

		Study Objective		Study Design		Study Population				
Reference	Year	Clear Objectives	Prospective	Multi-Centre	Consecutive Recruitment	Patient Characteristics Described	Clear Inclusion / Exclusion Criteria	Similar Point in Disease		
Gupta et al. ¹	2011	Yes	No	No	Unclear	Yes	Yes	Yes		
Kumar et al. ²	2011	Yes	Yes	No	Yes	Yes	Yes	Yes		
Shona et al. ³	2011	Yes	No	No	Unclear	Yes	Yes	Yes		
Pushpoth et al.4	2012	Yes	No	No	Yes	Yes	Yes	Unclear		
Muniraju et al. ⁵	2013	Yes	No	No	Yes	Partial	Yes	Yes		
Tan et al. ⁶	2013	Yes	No	No	Unclear	Partial	Yes	Yes		
Ross et al. ⁷	2013	Yes	Yes	No	Unclear	Yes	Yes	Yes		
Chavan et al. ⁸	2014	Yes	Yes	No	Yes	Yes	Yes	Yes		
UK AMD EMR ⁹	2014	Yes	No	Yes	Unclear	Yes	Yes	Yes		
Basheer et al. ¹⁰	2015	Yes	Yes	No	Unclear	Partial	Yes	Yes		
Borooah et al.11	2015	Yes	No	Yes	Unclear	Partial	Yes	Unclear		
Williams et al. ¹²	2015	Yes	Yes	No	Yes	Partial	Yes	Yes		
Buckle et al. ¹³	2016	Yes	No	No	Unclear	Yes	Yes	Yes		
Razi et al. ¹⁴	2016	Yes	No	No	Yes	Yes	Yes	Yes		
Talks et al. ¹⁵	2016	Yes	No	Yes	Unclear	Yes	Yes	Yes		
Almuhtaseb et al. ¹⁶	2017a	Yes	No	No	Unclear	Yes	Yes	Yes		
Almuhtaseb et al.17	2017b	Yes	No	Yes	Unclear	Yes	Yes	Yes		
Lee et al. ¹⁸	2017	Yes	No	Yes	Unclear	Yes	Yes	Yes		
Vardarinos et al. ¹⁹	2017	Yes	No	No	Unclear	Yes	Yes	Yes		
Yang et al. ²⁰	2017	Yes	Partial	Yes	Unclear	Yes	Yes	Yes		
Ozturk et al. ²¹	2018	Yes	No	No	Unclear	Yes	Yes	Yes		
Eleftheriadou et al.22	2018	Yes	No	No	Yes	Yes	Yes	Yes		
Fulcher et al.23	2019	Yes	No	No	Unclear	Yes	Yes	Yes		
Fasler et al. ²⁴	2019	Yes	No	No	Unclear	Yes	Yes	Yes		
Horner et al. ²⁵	2019	Yes	No	No	Yes	Yes	Yes	Yes		
Chandra et al.26	2020	Yes	No	No	Yes	Yes	Yes	Yes		

Supplementary Table 2. Bias Assessment: Institute of Health Economics (IHE). Quality Appraisal of Case Series Studies Checklist.²⁷

		Intervention and co- intervention Outcome Measures							
Reference	Year	Intervention Described Clearly	Co- Interventions Described Clearly	<i>A priori</i> outcomes measures	Masked Outcome Assessors	Appropriate Outcome Measures	Before and After Intervention	Appropriate Statistical Tests	
Gupta et al. ¹	2011	Yes	Yes	Yes	No	Yes	Yes	Yes	
Kumar et al. ²	2011	Yes	Yes	Yes	No	Yes	Yes	Yes	
Shona et al. ³	2011	Yes	Yes	Yes	No	Yes	Yes	Yes	
Pushpoth et al.4	2012	Yes	Yes	Yes	No	Yes	Yes	Yes	
Muniraju et al.⁵	2013	Yes	Yes	Yes	No	Yes	Yes	Yes	
Tan et al. ⁶	2013	Yes	Yes	Yes	No	Yes	Yes	Yes	
Ross et al. ⁷	2013	Yes	Yes	Yes	No	Yes	Yes	Yes	
Chavan et al.8	2014	Yes	Yes	Yes	No	Yes	Yes	Yes	
UK AMD EMR ⁹	2014	Yes	Yes	Yes	No	Yes	Yes	Yes	
Basheer et al. ¹⁰	2015	Yes	Yes	Yes	No	Yes	Yes	Unclear	
Borooah et al. ¹¹	2015	Yes	Yes	Yes	No	Yes	Yes	Yes	
Williams et al. ¹²	2015	Yes	Yes	Yes	No	Yes	Yes	Unclear	
Buckle et al. ¹³	2016	Yes	Yes	Yes	No	Yes	Yes	Yes	
Razi et al. ¹⁴	2016	Yes	Yes	Yes	No	Yes	Yes	Unclear	
Talks et al. ¹⁵	2016	Yes	Yes	Yes	No	Yes	Yes	Yes	
Almuhtaseb et al. ¹⁶	2017	Yes	Yes	Yes	No	Yes	Yes	Yes	
Almuhtaseb et al.17	2017	Yes	Yes	Yes	No	Yes	Yes	Yes	
Lee et al. ¹⁸	2017	Yes	Yes	Yes	No	Yes	Yes	Yes	
Vardarinos et al. ¹⁹	2017	Yes	Yes	Yes	No	Yes	Yes	Yes	
Yang et al. ²⁰	2017	Yes	Yes	Yes	No	Yes	Yes	Yes	
Ozturk et al. ²¹	2018	Yes	Yes	Yes	No	Yes	Yes	Yes	
Eleftheriadou et al.22	2018	Yes	Yes	Yes	No	Yes	Yes	Yes	
Fulcher et al.23	2019	Yes	Yes	Yes	No	Yes	Yes	Yes	
Fasler et al. ²⁴	2019	Yes	Yes	Yes	No	Yes	Yes	Yes	
Horner et al. ²⁵	2019	Yes	Yes	Yes	No	Yes	Yes	Yes	
Chandra et al.26	2020	Yes	Yes	Yes	No	Yes	Yes	Yes	

				Competing interests and sources of support	Domains completed				
Reference Year		Follow-up Long Enough	Losses to Follow-up Reported	Estimates of Random Variability	Adverse Events	Conclusions Supported by Results	Competing Interests Reported	completed	
Gupta et al. ¹	2011	Yes	Yes	Yes	Partial	Yes	Partial	15.5	
Kumar et al. ²	2011	Yes	Yes	Yes	Partial	Yes	Partial	17	
Shona et al.3	2011	Yes	Yes	Yes	Partial	Yes	Partial	15.5	
Pushpoth et al.4	2012	Yes	Yes	Yes	Partial	Yes	Yes	16	
Muniraju et al.⁵	2013	Yes	Yes	Yes	No	Yes	Partial	15	
Tan et al. ⁶	2013	Yes	Yes	Yes	No	Yes	No	14	
Ross et al. ⁷	2013	Yes	Yes	Yes	Partial	Yes	Partial	16.5	
Chavan et al. ⁸	2014	Yes	Yes	Yes	No	Yes	Partial	16.5	
UK AMD EMR ⁹	2014	Yes	Yes	Yes	Partial	Yes	Partial	17	
Basheer et al. ¹⁰	2015	Yes	Yes	Partial	No	Yes	Yes	15	
Borooah et al. ¹¹	2015	Yes	Yes	Yes	No	Yes	Yes	15.5	
Williams et al. ¹²	2015	Yes	Yes	Partial	No	Yes	Partial	15	
Buckle et al. ¹³	2016	Yes	Yes	Partial	Partial	Yes	Partial	15	
Razi et al. ¹⁴	2016	Yes	Yes	Partial	Partial	Yes	Partial	15	
Talks et al. ¹⁵	2016	Yes	Yes	Yes	No	Yes	Yes	16.5	
Almuhtaseb et al. ¹⁶	2017	Yes	Yes	Partial	No	Yes	Partial	14.5	
Almuhtaseb et al.17	2017	Yes	Yes	Yes	No	Yes	Yes	16.5	
Lee et al. ¹⁸	2017	Yes	Yes	Yes	No	Yes	Yes	16.5	
Vardarinos et al. ¹⁹	2017	Yes	Yes	Yes	Yes	Yes	Yes	16.5	
Yang et al. ²⁰	2017	Yes	Yes	Yes	No	Yes	Yes	17	
Ozturk et al. ²¹	2018	Yes	Yes	Yes	No	Yes	Yes	15.5	
Eleftheriadou et al.22	2018	Yes	Yes	Yes	No	Yes	Yes	16	
Fulcher et al. ²³	2019	Yes	Yes	Yes	No	Yes	Yes	15.5	
Fasler et al. ²⁴	2019	Yes	Yes	Yes	No	Yes	Yes	15.5	
Horner et al. ²⁵	2019	Yes	Yes	Yes	No	Yes	Yes	16	
Chandra et al. ²⁶	2020	Yes	Yes	Yes	Partial	Yes	Yes	16.5	

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