Supplementary material

Agent	Reference	Study Design	Treatment Arm(s)	Reduction in Mean or Median Lesion Count	Adverse Events	Patient satisfaction
Ingenol Mebutate	Emilio et al.[9]	Prospective pilot study	A) Applied 1X daily for 3days (n=28)	80% reduction in AK lesion number	75% of patients had a mild to moderate local skin reaction	Overall scores improved from 24.5% at baseline to 15.5% at day 60 (p=0.031) using the Skindex-16 survey
	Augustin et al.[10]	Post-hoc analyses for four, phase III clinical trials	A) Ingenol mebutate (n=277) B) Vehicle (n=270) applied 1X for 3 days to face and scalp C) Ingenol mebutate n=226) and vehicle (n=232) applied once daily for 2 days to trunk and extremities	NA	NA	Positive associations between Treatment Satisfaction Questionnaire for Medication score and degree of clearance for the face/scalp (P < .0001 and global satisfaction P = .0002) and trunk/extremities (P < .0001 and P = .0014, respectively) groups -significant association between Skindex-16 score and clearance for patients in the face/scalp group for change in symptoms (P = .0218), emotions (P = .0002), and overall Skindex-16 score (P = .0006) from baseline
Imiquimod	Waalboer-Spuij et al.[19]	Open-label multicenter study	A)Imiquimod applied 1X daily, 3X per week for 4	NA	Itching, redness and pain/burning.6-7%	No clinically relevant HRQoL impact according to

			weeks in AK patients (n=118) B)Imiquimod applied 1Xdaily, for 5 days per week for 6 weeks		discontinued therapy due to adverse events	Skindex-17 and SCI; Median TSQM of patients with AKs: complete response: 61, partial response = 54, No response=22
Diclofenac Sodium and 5-FU	Segatto etal.[27]	Parallel group clinical trial	A)DES applied 2X daily for 12 weeks (n=15) B) 5-FU cream applied 2Xdaily for 4 weeks (n=13)	A)DFS group: average number of lesions before treatment was 13.6 and 6.6; p<0.001) after treatment B) 5FU group average number of lesions before treatment was 17.4 and 3.15; p<0.001) after treatment *Significant reduction in 5FU group compared to DFS (p<0.001)	Higher satisfaction regarding adverse events reported in Patients treated with DFS (93.3% vs. 38.4%, p =0.008)	54% of patients treated with 5-FU reported all lesions to be healed in comparison with 20% of patients treated with DFS according to Patient Global Improvement Score; High degree of satisfaction in both groups (73% in the diclofenac sodium group and 77% in the 5-Fluorouracil group; p=0.827)
PDT	Tran et al.[32]	Retrospective Study	Patients had PDT field therapy using either 160mg/g MAL cream or generic compound 20% 5-ALA solution (n=35)	NA	58% of patients reported severe pain	50% of respondents reported high efficacy; 70% found PDT to be barely affordable; 66% of respondents said they would recommend PDT to others
	Lacour et al.[33]	Phase III trial	Patients treated with (MAL) DL-PDT on one side of the	Total lesion complete response rate of DL-PDT was	Mean pain score of DL-PDT 0.7 versus 4.4, for c-PDT on a 0 to 10	64.8% of subjects were very satisfied with DL-PDT compared to

			face and (MAL) c-PDT contralaterally (n=96)	similar to tthat of c-PDT (70%vs 74% respectively)	scale; p < 0.001)	18.9% with c-PDT; More patients found DL-PDT to be convenient when compared to those treated with c-PDT (53.8% versus 10.5%, respectively).
Imiquimod and PDT	Serra-Guillen et al.[22][2][2]	Prospective comparative study	A) PDT administered with MAL cream in a single session (n=29) B)Imiquimod applied 3X per week every other day for 4 weeks (n=29)	N/A	34% poor tolerance for PDT and 28% of Imiquimod	93% of patients treated with PDT were very satisfied compared to 63% treated with imiquimod (p = 0.004)
Diclofenac and PDT	Zane et al.[1]	Prospective study	A)Self applied diclofenac twice daily for 90 days (n=100) B) 2 treatments of PDT given (n=100)	Remission rates were 85.9% with MAL-PDT and 51.8% with diclofenac (p<0.0001)	All patients treated with PDT reported mild-to moderate pain; Mild to moderate erythema was reported with itching and burning reported in 84/100 patients treated with diclofenac	Patients treated with MAL-PDT noted being very satisfied than those treated with DHA (59% versus 6%, P < 0.0001
PDT, Imiquimod, and 5-FU	Tierney et al.[36]	Self-Administered survey	Patients who had received PDT for AKs (n=45)	N/A	N/A	Patients significantly preferred PDT to 5-FU (p <0.001) and imiquimod (p = 0.031), excision (p = 0.02).
PDT and Cryotherapy	Morton et al.[39]	Intraindividual comparative study	Subjects received treatment with PDT and cryotherapy randomly allocated to alternate sides of the	86.9% lesion reduction at week 12 for PDT and 76.2% for cryotherapy compared to baseline	N/A	Patients preferred MAL-PDT to cryotherapy (49.2% vs. 20.6%, p < 0.001),

			face/scalp (n=119)	(p<0.001); 89.1% lesion reduction at week 24 for PDT and 86.1% for cryotherapy compared to baseline (p=0.20)		
PDT and Cryotherapy	Kaufmann et al.[40]	Intraindividual comparative study	Subjects received treatment with PDT and cryotherapy randomly allocated to alternate sides of the face/scalp (n=121)	78.0 % lesion reduction at week 24 for PDT and 88.0% for cryotherapy compared to baseline (p=0.02)	63% and 45% of patients experienced adverse events with cryotherapy and PDT, respectively	MAL-PDT preferred to cryotherapy for comfort (60% vs. 10%, p <0.001), healing outcome (64% vs. 6%, p <0.001), and overall patient satisfaction (49% vs. 20%, p < 0.001).